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PHOTO-ERA

The American Journal of Photography

Official Organ of the American Federation of Photographic Societies

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AWAY TO THE WEST
ARTHUR MARSHALL

PHOTO-ERA

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Planes in Landscape-Photography

WALTER ZIMMERMAN

WHEN we begin to take photography seriously, regarding it as a medium of pictorial expression, we use various terms employed by the artists of the brush and pencil, and often without any too clear perception of their several meanings. We are prone to confuse the words "atmosphere," "distance," "planes," "accents," and "perspective," as if all of them meant the same thing. I remember my own delight, some years ago, when told that a certain print, just hung up to dry, had "atmosphere." I did n't have the smallest idea what that meant, but it sounded well; and the remark had the fortunate result of causing me to think and ask.

"Atmosphere," I have learned since then, is the expression, by the brush or the camera, of the effect of light passing through the air; and giving the person who examines the picture the impression of sunlight, fog, haze, rain, snow or any other condition intended to be represented. "Distance" means the rendering of the picture so that while near objects shall so appear, distant objects shall really impress one as being far away. "Planes" are the several distances, such as foreground, accented point, middle-distance and remote distance. "Accent" suggests the portion of the picture to which the onlooker is supposed to give particular attention, the accented part being well drawn, with, perhaps, sharp definition, but certainly with comparatively strong effect of light and shade, and indicating the story that the artist has to tell. "Perspective" is a term too well understood to require definition and, in photography, is illustrated far better by the stereoscope than the single picture. Occasionally a single photograph conveys a stereoscopic impression, and the picture is sometimes classed as being excellent without the intending critic knowing why.

If any one were to tell you or me how to produce a picture, by photography, which should combine good atmosphere, well-rendered distance, plainly-indicated planes, definite accent and evident perspective he would render you or me a great service, and such a man or woman, by right, ought to produce marvels in photography. The present writer pretends only to suggest some of the things which ought to be done and others which ought to be avoided.

Let me say something, at the outset, in reference to outdoor photography which may be a shock to a large proportion of the pictorial and would-be-pictorial photographers. Under no circumstances intensify or reduce original negatives. Also, under no circumstances shadow or force the printing of the negative. If you carry out this advice you will be throwing reducers, intensifiers and masks in the scrap-heap. As a member of a large photographic club, I cannot fail to notice how many fellow-workers commit crimes against art by intensifying, reducing and masking, the writer having formerly been one of the

THE PARKWAY IN OCTOBER — PHIL M. RILEY

chief offenders. Ninety-nine per cent of my readers will demand the reason for the unusual advice just given. The answer is that the camera, lens and plate have really given, in a more or less efficient way, the true effect of light, shade, atmosphere and distance of the scene recorded by the opening of the shutter. Of course, it is utterly impossible, on either plate or paper, to reproduce the actual effect of light itself upon the eye; but the rendering on the plate is, with limitations, excellent. There are, of course, ways and ways to make the negative; that is, in exposure and development. For one thing, the exposure ought to be full, and the development such as will permit correct printing. By full exposure is meant, of course, that for the shadows, rather than for the possibly blinding high-lights. Such an exposure will give, according to the usual system of development, nothing. The usual system is to take the plate out of the developer just as soon as it blackens, as it will do almost immediately, such a plate being usually regarded as considerably over-exposed. In the first place, the plate should not be taken out simply because it has blackened, but it should be fully developed. The developer is, also, an important consideration. Pyro would, of course, produce a negative that would be impossible for ordinary printing-purposes. Metol, on the other hand, gives all detail, as well as softness. Metol, again, may be modified. When either stale or cold it acts slowly but surely, and gives, with time and patience, a negative showing everything in front of the lens, with correct gradation, but still having excellent printing-quality. Of course, during prolonged development the covering of the developing-tray must not be neglected, and even a "safe" dark-room light must not be tested too far. If

THE HARVEST — WILFRED A. FRENCH

you will take a negative made according to these suggestions you will find certain effects in atmosphere and distance; the important object, which you have probably focused on, will stand out, clearly and distinctly; the middle-distance will be plain, but unobtrusive; and the distance will be soft, white and blended with little gradation. You have, in this way, obtained effects which painters aim to produce with the brush. Don't misunderstand me as stating that you will, of necessity, get a real "picture" by doing this, because interest of subject, pictorial composition and excellence in massing are entirely outside of the scope of this article. I merely mean that one who makes negatives in this way is in on the right path to obtain pictorial effects when the other important conditions are fulfilled. These, then, are suggestions with which to obtain negatives in the future.

The advice as to not modifying negatives already made means that such modifications are more than likely to spoil or change the effects in light, shade and distance originally obtained. If the original negative is so dense that you cannot print with it on the paper that you prefer it is safer and better to make a new negative, of the proper printing-quality, than to run the risk of spoiling the original, as I, perhaps every reader, have done many times. If the original negative is too thin, and does not bring out the detail or effect desired, intensifying will not produce either detail or effect. In other words, you cannot put the negative into the intensifier and bring out that which you should have brought out by exposure and development in the first instance. On the contrary, the intensifier will strengthen the little that is already there, and make the absence of that which is not there all the

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GOLFING AT ST. MORITZ WALTER ZIMMERMAN

more conspicuous. As to local intensification or reduction, it should not be so much as mentioned, much less practised, since it must, of necessity, give false, misleading and inartistic effects. The reader will, without suggestion, observe that masking produces the same incorrect effect as with local intensification and reduction.

Having now recommended the avoidance of several things generally considered to be necessary, the next step is to propose other methods by which desired effects may be obtained, and more correctly.

One of these methods is to make a change in the printing-medium. Many photographers have been accustomed, for instance, to the use of gaslight paper exclusively. If they have in their collection of negatives any which do not give good results on gaslight paper they consider such negatives useless unless intensified or reduced, or worked locally, as the case may be. Suppose the negative to be so dense in the high-lights that the prints show absolute black shadows, with hardly any form in the high-lights. One remedy is to use the negative for printing on bromide or enlarging-paper. This paper averages sixty times the rapidity of the chloride or gaslight papers. If you will give one-sixtieth of the exposure that appeared to be normal with the slow paper and then develop with a weak developer it will be found that, while the shadows show definition and gradation, the high-lights, such as clouds and snow-capped mountains, will be properly printed, and all will appear in relative proportion as to light and shade. If, on the other hand, you have been accustomed to print on platinum paper, and find that you have a negative that is entirely too thin and flat to give satisfactory results, you will find that if you change the process and make prints on slow gaslight paper you will have ob-

tained unexpected contrast and gradation. These suggestions relate to the printing from original negatives, without modification.

A more important reason for retaining the original negative without modification is that, if defective, a new negative may be made from it, either of the same or larger size; which, retaining all of the good quality of the orginal, may be free from the objection as to difficulty in printing. I mean that there are many negatives which would be excellent except for the difficulty of obtaining prints. The following experiment will be interesting to show what may be done in such a case. For a heavy, dense, so-called unprintable negative, take it in the dark-room and put it in the printing-frame, in contact, film to film, with a fast plate. The exposure must be for the high-lights, the denser parts of the negative, so that the positive will show texture and gradation in the light parts of the picture. Develop this plate, so exposed, in stale or cold metol developer, with full development. The result is likely to be an agreeable surprise to you. From this transparency or positive a new negative is to be made, in the same manner, and again with a fast plate. The exposure from the new positive, which ought to be thin, but with full detail, will be far shorter than that with the unprintable negative, perhaps a second for the positive as compared with a minute for the negative. The new negative, if your work has been properly done, should print in a small fraction of the time of exposure as compared with the original. The prints will also be far better than from a chemically-reduced negative.

If, instead of making a new negative of the original size, you wish to enlarge, you may follow out the same principles that have just been given — namely, to expose for the high-lights on a fast plate — and in that way obtain a negative enlargement of far better printing-quality than the original small negative.*

The reverse of this method for softening may be applied to extremely thin or "window-glass" negatives. Intensification has its element of danger to the negative, as well as the objection of irregularity — as the writer has found, to his regret, in connection with every negative which he intensified. A far better result may be obtained, without the slightest risk to the original negative, by making a contact positive, using this time a slow plate, such as a process or contrast. A properly-exposed and fully-developed positive, with *normal* developer, will probably show considerable improvement. This exposure should be long and with a weak light. A contact negative, also on a slow plate, and with normal developer and development, should be far more satisfactory than an intensified original would have been. If you wish to verify this for yourself you have only to intensify the original after you have, with these suggestions, made a good duplicate, and then compare the printing-results by the two processes. Reduced and intensified negatives are not always bad; and I would not intimate that no one can make a thoroughly good reduction or intensification; but the average results are far from good, and, therefore, the adoption of one of the methods indicated is not only better, but safer. In this way the photographer retains the effects in atmosphere and distance obtained by the lens and plate at the time of the original exposure.

The writer hopes that the reader may be able by means of these recommendations to make use of desirable negatives which, on account of their poor printing-quality, have been laid aside as useless. As to masking prints, the thing is mentioned only in order to give the earnest advice that the reader make it a custom never to do such a thing under any circumstances whatever.

* See *Photo-Miniature* No. 100, on "Enlarging," by the author.

There is a sort of Rubicon which art should not cross. — HENRY HAVARD.

A Modified Kodak

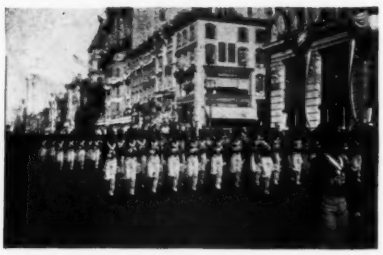
WILFRED H. SCHOFF

FOR some time I have felt the need of a small, light and dependable camera which would give a picture sharp enough to stand inspection at original size or enlarged; one which could be slipped into an ordinary pocket and still yield results which would be available for lantern-slide work when necessary.

Of the many devices on the market none seemed quite to satisfy these requirements. Either the optical equipment was insufficient for serious work, or the need of a supply of single plate-holders so increased the bulk of the outfit as to make its portability more apparent than real. If plates must be carried along, a larger reflecting-camera might just as well go with them.

The only American film-camera which ever did really go into an ordinary pocket, without projecting above the flap or bulging the sides out of shape, was the No. O Kodak, which deserved a better fate than to be withdrawn from the market a couple of years ago. Six or eight twelve-exposure rolls of this size, $1\frac{5}{8}$ x $2\frac{1}{2}$, could readily be carried in one pocket while the camera went into the other, giving a traveling-capacity twelve times greater than that of any plate-camera made, and twice as great as that of any film-pack-camera. The short focal length made it particularly desirable, and the only thing needed was to substitute for the cheap equipment a good, fast lens and modern shutter, suitably protected.

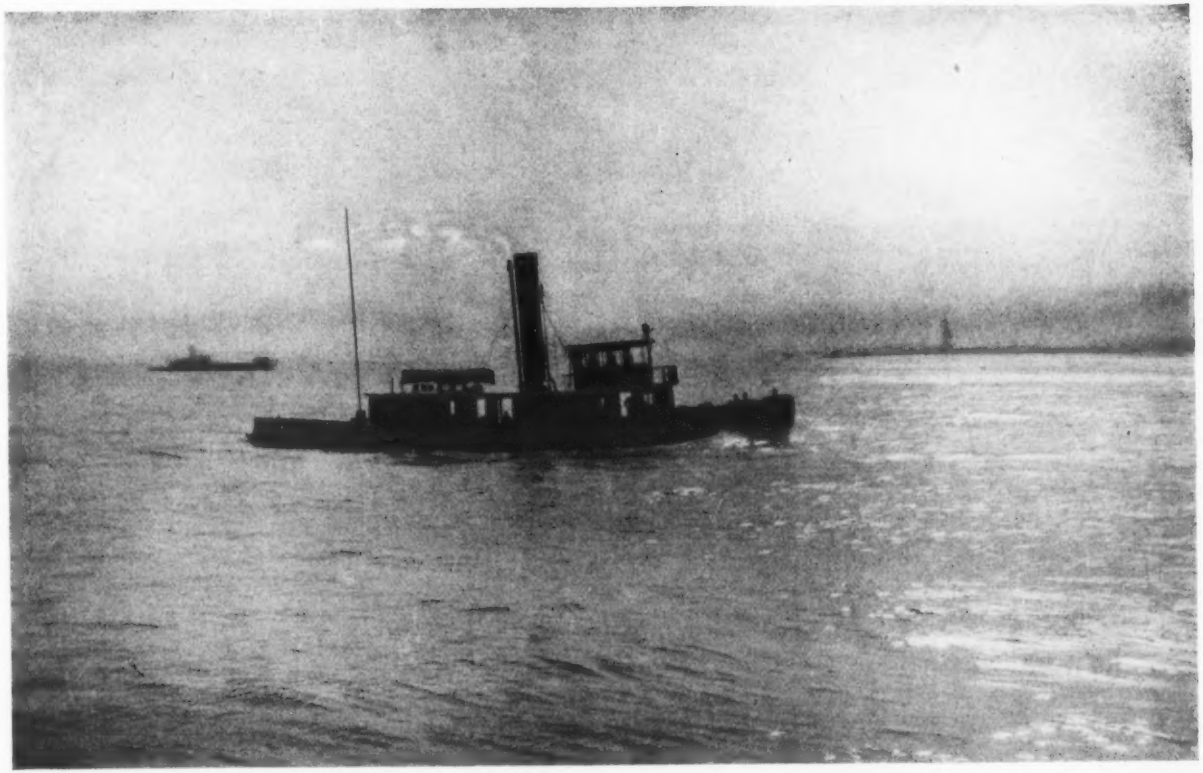
For this camera I selected a Beck Isostigmar lens, Series I, No. 2, f/4.5, focal length three inches (intended by its makers for cinematograph work), and a No. 1 Koilos shutter, with T. and B. exposures and speeds from 1 to $\frac{1}{100}$ second.



ORIGINALS OF ENLARGEMENTS ON THE TWO FOLLOWING PAGES

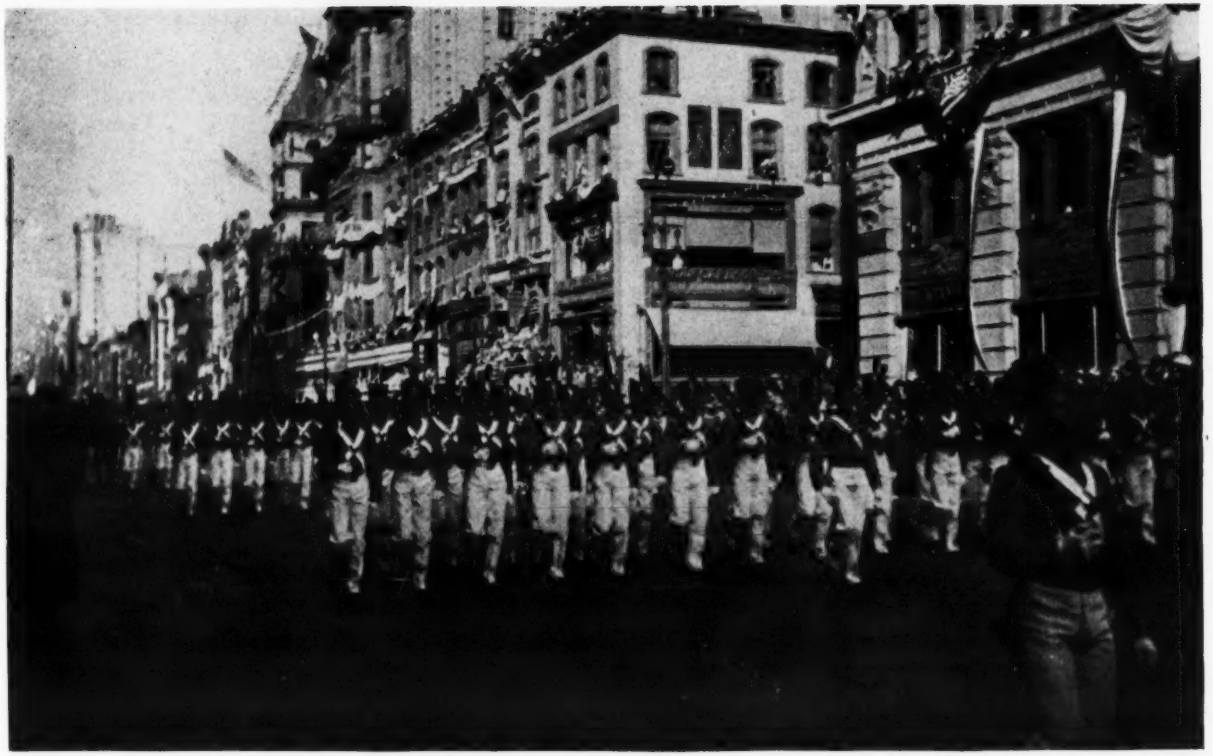
This equipment was set in a recessed, aluminum front, fastened to the lazy-tongs in place of the old front, and required only very slight cutting of the camera-frame to permit it to lie perfectly flat. Side-openings in the frame provided for both finger and bulb-release, and a spring-actuated, hinged prop, set a little off the center, gave support for time-exposures at both end and side positions. A thin aluminum cover, easily set or removed, protected the lens and shutter; while a small felt pad, glued to the back, corrected the inevitable slight buckling of the film, and a Newton direct-vision finder, fastened to the side of the camera, completed the outfit. This work was very skilfully done by Mr. Herbert Cross, of Philadelphia.

The advantages of such an equipment are, briefly, as follows: a three-inch lens at f/4.5, set to focus at its hyperfocal length, sixteen feet eight inches, will give sharp focus from eight feet four inches to in-



SMOKY AFTERNOON, NEW YORK HARBOR — WILFRED H. SCHOFF

Enlarged about three diameters on paper intended to give softness and pictorial effect



HUDSON-FULTON PARADE, NEW YORK CITY — WILFRED H. SCHOFF

Enlarged about three diameters on paper intended to give snappy detail

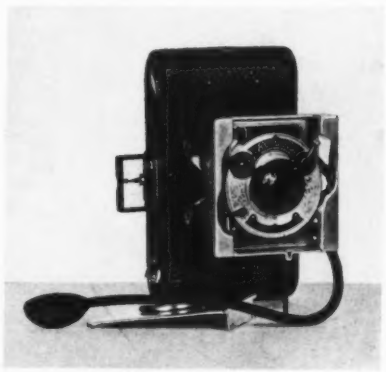
finity, thereby including everything within the ordinary field of the camera, and admitting of any scale of enlargement; and particularly of projection after enlargement to lantern-slide size. The great speed, f/4.5, can be used at all times without sacrificing depth, making the camera dependable under the most unfavorable conditions of light. This would be impossible with a lens of greater focal length, which it would be necessary to stop down when racked out to focus on near objects.

CAMERA CLOSED

Theoretically, anything nearer than half the hyperfocal length, in this case eight feet four inches, would be out of focus unless the lens were stopped down; but a practical test shows that the loss is hardly perceptible, and that this lens will make a sharp picture of a head and shoulders within four feet, or practically down to the limit of the field of vision. If improvement be desired, a smaller diaphragm, f/5.6, will give definition sufficient for the most critical eye.

With this camera a series of pictures was made of one of the parades in the recent Hudson-Fulton celebration. The test was severe, because the exposures were made near the curb, looking both across and down the street. On the negatives the front rank of soldiers is sharp from one side of the street to the other, while the rear ranks, and the line of buildings, are sharp to the horizon. One of these negatives was enlarged from 1⅝ inches to 27 inches, or 16.6 diameters (equivalent to 275 times magnification), losing practically no detail in the process; and it would have stood twice that enlargement just as satisfactorily.

The results attained by the use of a fast short-focus lens at fixed position approximate the image reflected through the human eye, which works under similar conditions. A lens of longer focus, if fast enough for quick work, loses depth to a degree that the eye does not corroborate; and it cannot regain it without such stopping-down as largely to sacrifice its speed. It is, indeed, questionable whether the most correct photography of the future will not be done through lenses which thus closely parallel the human eye, and which will in their turn require of the film and plate-makers a truer registry and a finer grain than they have yet produced.



CAMERA OPEN

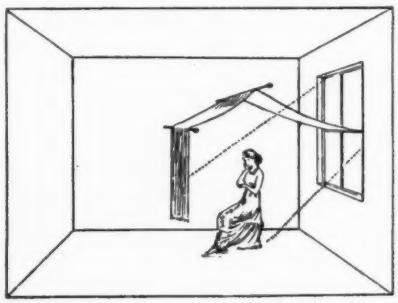
Some do not hear Opportunity when she knocks because they are knocking at the time. — ELBERT HUBBARD.

Indoor Portraiture in Dull Weather

J. PEAT MILLAR

MOST amateurs, when they first attempt indoor portraiture, are troubled by getting excessive contrast in their negatives. This is likely to be very much in evidence at the present time of year, while the light is dull and the days are short.

The portrait-negatives produced at home are generally blocked up in the high-lights, and far too dark and heavy in the shadows, and come under the designation "soot and whitewash." The cause of this is generally put down to under-exposure and want of light. This is not altogether right, for if there is not plenty of exposure such excessive density cannot easily be got. The real trouble is that there is too much light on one part and too little on another.



This can, to a certain extent, be helped by the use of suitable reflectors to lighten up the shadows. But to get the best results with reflectors a certain amount of knowledge and experience is required, which a beginner cannot be expected to have, and the result is he generally uses reflectors to the least advantage.

There is another method of arriving at the same result which is as good, if not better, than reflectors, and the indoor worker cannot very easily misuse it. It is also worthy of note that many up-to-date professional photographers use it to great advantage. There is no special name for the method; it is simply a matter of diffusing the light, before it reaches the sitter, by means of a piece of thin fabric, such as white "butter-muslin" placed between the light and the sitter.

Professionals generally use it in the form of a large hoop, with the cloth stretched across it, and a long handle attached to the hoop to hold it by. When making the exposure it is held over the sitter's head, so as to diffuse the light which falls on the face. The nearer it is held to the sitter the more pronounced the effect.

For home work the amateur need not think of either buying or making any special apparatus; all he requires is a yard of muslin suspended on two cords in front of the window; this can be raised or lowered by slackening or tightening the cords.

A plate exposed on a sitter without the diffuser and another with the diffuser in position will be a lesson in itself; the shadows will all be softened and the lights toned down when the diffuser is used; in short, the high-lights will have received less exposure, and the shadows more, so that the whole negative will develop more in harmony, and a great deal softer.

At the same time you must remember that this of itself will not give what is known as "studio lighting." It will be too much of a side-lighting for that, unless the worker blocks up the lower half of the window, which in a measure helps, as the more one can get the effect of a top-light in an ordinary room the better for the purpose in hand.

But if it is desired to turn the room into a provisional studio for portraiture, the following plan answers very well. Procure four or five yards of some thin white material. Muslin will do, if a good quality is obtained.

Now take one end of the material and tack it to the center-rail of the window;

this becomes for the time being the eaves of the *pro tem* studio. Now run a cord across the center of the room, about the same height as the top of the window, and throw the cloth over this. This cord represents the ridge of the studio.

Another cord is placed across the room at the same height as the center-rail of the window. The cloth is also thrown over that and allowed to hang down, and completes the arrangement.

A studio is now at hand with a side-light, which is the lower half of the window left bare, and a top-light coming from the top half of the window and diffused to the proper angle by the white cloth; and on the other side is what may be considered a white wall and roof reflecting a certain amount of light on the dark side of the subject.

If a sitter is placed under this canopy of white material it will be found that he is very evenly lighted, there being an entire absence of heavy shadows.

With an arrangement of this kind the beginner will never be troubled with negatives of excessive contrast, and the exposure will never require to be any longer than what would be required without the canopy of diffusing-material. It is always as well to keep the sitter as low down as convenient, unless the window be an extra high one.

All the different effects of light and shade can be obtained on the face by turning it a little to one side or the other; in fact, one can work as if in a properly-lighted studio, and the same rules apply in both cases, as far as single figure-studies are concerned.

Use the lens at its widest opening, and give a full exposure. The result will be a soft, well-graduated negative, well worth all the trouble that was taken to secure it. A well-exposed and developed negative, taken under the above conditions, seldom requires any retouching, and this is a point worth considering.— *The Amateur Photographer.*

GYPSIES — H. BERSSENBRUGGE

SIXTH AMERICAN PHOTOGRAPHIC SALON

Time-Development

Its Excellences and Its Abuses

GASTON M. ALVES

IT is now known that time-development of our exposures is the best means yet devised of attaining our ends. Properly carried out, development is no longer a matter of judgment, but one of carrying out certain precise regulations. So long as it was believed that different exposures, lesser or greater, required for their proper development to remain in the solution longer or shorter times, time-development seemed irrational. But it is now known that within a wide range — in fact, within the limits of practical and usable exposures — our under, proper and over-exposures will reach their development in practically the same length of time in the same solution. Our negatives will be thin or dense in proportion to the exposures, but they will all yield prints, by proper printing-processes, well balanced in the lights and shades, pleasing and realistic in their contrasts. Proper density in a negative is important, but its importance is secondary. Its defects can usually be cured by the after-processes of our work. Proper and realistic rendering of the lights and shades — the realistic contrasts — is all-important in a negative. Defects here by no after-process can ever be done away with. Therefore, we should develop our exposures to the proper stage of contrasts, and let the density take care of itself. If our exposures have been about rightly timed, then when the negative has reached its proper contrasts it will also have reached the desirable density; but under proper development the slighter exposures are bound invariably to give more or less thin negatives, and the greater exposures to give more or less dense negatives.*

*True, if we only knew our over-exposures beforehand the use of potassium bromide would give us a negative not over-dense; but we run the risk of faulty contrasts; and besides, if by a happy chance we get these right we still have gained nothing, for by properly reducing our over-dense negative given by time-development we will get the desirable amount of density with the well-balanced contrasts.

Now by time-development we carry the process up to, and only up to, the proper contrasts and get negatives of varying density, but all capable, if the exposures are within practical and usable limits, of yielding pleasing and realistic gradations of light and shade in the prints. Whereas, going by the old methods of inspecting the negatives during the process of development, the worker has only the density to guide him. He may delude himself into thinking he is judging also of the contrasts, but this is quite impossible in the dark-room. Indeed, after a negative is developed, fixed and inspected against the sky no expert can tell to a nicety what will be the rendition of the lights and shades in the print. For a critical judgment his resort must be the printing-frame. Going, then, solely by the density, with his properly-timed exposures he will get good rendition of the contrasts, but to escape over-density he will inevitably take out his over-exposures too soon, which will result in dull prints, and he will leave his under-exposures in too long, which will yield harsh and over-contrasty prints. Within the wide limits of usable exposures the worker by time-development will get negatives varying in density, but uniform in pleasing and well-balanced prints; whereas the worker by the old methods will get reasonably-uniform negatives as to density, but many prints too dull on the one hand or too harsh on the other. Of course, to get prime photographs, the natural or controlled lighting should be good; but with these, and reasonably-timed exposures, there is no reason why with an intelligent use of time-development we should not always correctly register in our prints what is before the lens.

But, as excellent as time-development is, to get satisfactory results we must be precise in carrying out all of its details. There are four factors to be reckoned

with: (1) strength of solution; (2) extent of movement of solution over the plate or film; (3) time of the development; (4) temperature of the solution. The first three may readily be controlled, but the last will frequently need more care, and it is here where the abuses most commonly come in. We may aim at the 66° temperature as our basis, but we do not always get it.

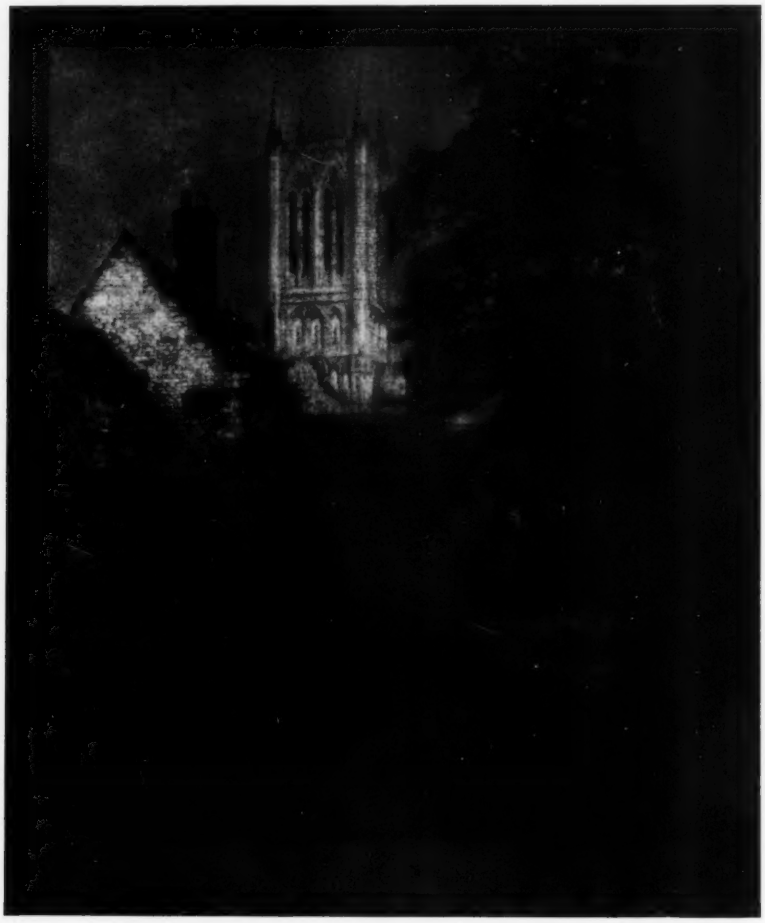
In warm weather, when the temperature of the plates and receptacles is high, we cannot well know exactly how much colder than the 66° to make the solution so that the equated or resulting temperature will be 66°. Neither can we correctly estimate for the reverse conditions of cold weather. Consequently, we must employ the resulting or equated temperature as we find it by test, and make use of a sliding scale of time to correspond. Now to find this sliding scale. Abundant and trustworthy experiments show that within the usual degrees of temperatures of development a rise of about 14° will cut the time of development just one-half; that is, if it should require twenty minutes at a temperature of 58° to make the development, a rise to 72° would complete it in just ten minutes. From this data the mathematician can by his logarithms construct the time-curve for each particular degree to a nicety. We will, however, be satisfied with every two degrees — the even ones as registered upon the ordinary thermometers. If we take the series 18, 20, 22, 24, 27, 30, 33, 36, we will have the points of this time-curve for every two degrees, within an error of only about three per cent — errors quite too small to be noticed here. By halving or doubling this series we can have a scale of time for any of our requirements. For convenience, this is done in the table opposite, which provides for the strongest developing-solutions down to the weakest.

The use of the table will be readily understood. As before said, it covers the use of very strong solutions down to very weak ones. The column under the 66° is the objective or basic temperature; but all within the scope of the table will give satisfactory results. If we are using a twenty-minute solution — twenty minutes at 66° temperature — and we find upon test that our solution is 70°, we pass to the left and under the 70° we find 16½ minutes to be the proper time for the development. If, instead, the temperature was found to be 62°, under the 62° we find twenty-four minutes as the proper time. And so on, for any other time of development or for any other temperature.

Much of the time the temperature of the dark-room will be within the limits of the table — from 58° to 72°. When such is the case, and when the developing-water, the receptacles and the plates have been in the room sufficiently long to have acquired its temperature, then no change need be made in the temperature of the water or the solution; for the temperature of the solution may be taken as that of the room, as registered by the thermometer placed near these articles. Under such conditions the development is simplified. If, for instance, the thermometer shows the tem-

Table of Development in Minutes For Corresponding Degrees

DEGREES, FAHRENHEIT.							
72°	70°	68°	66°	64°	62°	60°	58°
2¼	2½	2¾	3	3¼	3¾	4	4½
2½	2¾	3	3¼	3¾	4	4½	5
2¾	3	3¼	3¾	4	4½	5	5½
3	3¼	3¾	4	4½	5	5½	6
3¼	3¾	4	4½	5	5½	6	6¾
3¾	4	4½	5	5½	6	6¾	7½
4	4½	5	5½	6	6¾	7½	8¼
4½	5	5½	6	6¾	7½	8¼	9
5	5½	6	6¾	7½	8¼	9	10
5½	6	6¾	7½	8¼	9	10	11
6	6¾	7½	8¼	9	10	11	12
6¾	7½	8¼	9	10	11	12	13½
7½	8¼	9	10	11	12	13½	15
8¼	9	10	11	12	13½	15	16½
9	10	11	12	13½	15	16½	18
10	11	12	13½	15	16½	18	20
11	12	13½	15	16½	18	20	22
12	13½	15	16½	18	20	22	24
13½	15	16½	18	20	22	24	27
15	16½	18	20	22	24	27	30
16½	18	20	22	24	27	30	33
18	20	22	24	27	30	33	36
20	22	24	27	30	33	36	40
22	24	27	30	33	36	40	44
24	27	30	33	36	40	44	48
27	30	33	36	40	44	48	54
30	33	36	40	44	48	54	60



JAMES STREET, LINCOLN, ENGLAND BERTRAM COX

perature of the room to be 60°, and we are using a twelve-minute solution, we simply find the 12 under the 66°, and pass to the right, and under the 60° we have 16½ minutes for the development, all without taking any temperature of the solution whatever. It must be remembered, however, that open water and all other open liquids will, due to evaporation, be always several degrees lower in temperature than the room. Therefore, correctly to use this method, we must make it a rule to keep the water in the room stoppered.

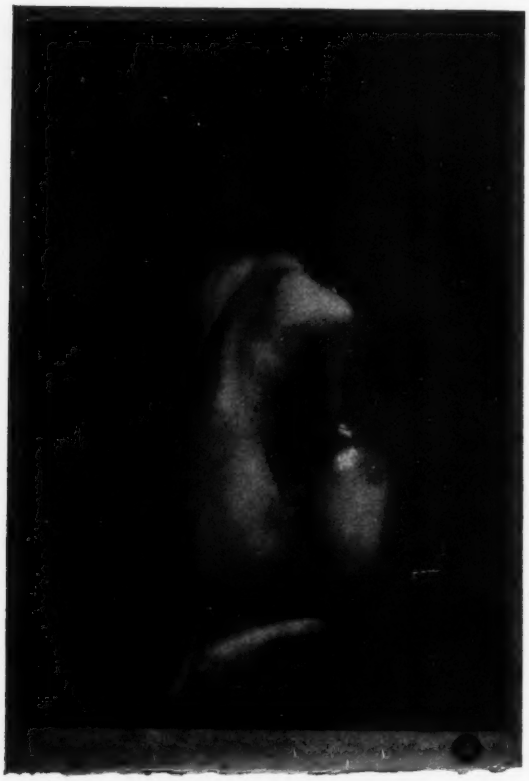
But it often happens that the temperature of the room is beyond the limits of this table — that it is either higher or lower than the 58° to 72°. In that case proceed as follows: if it is higher, then make the initial temperature of the solu-

AT THE OPEN DOOR — E. T. HOLDING

tion about 60° or lower, pour it into the tray or tank, and after waiting somewhere about one-third of the time of development take its temperature again, the last temperature being that which is to govern us for the precise time. But if the temperature of the room is lower than shown by the table make the initial temperature of the solution about 70° or higher, and proceed as in the foregoing.

The stronger solutions are generally used in trays; the weaker, in tanks. If there is much aberration in the timing of the exposures both theory and experiments point to the weaker solutions. With fairly good exposures about a twelve-minute solution in a tray is preferable.

It must be remembered that the more the solution is set in motion the quicker the development. Therefore, for uniform



NUDE STUDY MRS. JEANNE E. BENNETT

results, it is necessary to adopt some uniform standard here.

Contrary to the belief of some, it is not at all necessary to confine ourselves to pyro in time-development. Any standard developing-agent lends itself to this purpose. All one needs to do is to learn the developer he is using.

It is best for the worker to determine all of his conditions for himself. If he does not do this he will never become very successful. Let him use the kind and strength of developer he may choose, and then test for himself for the proper time. Let him carefully experiment with his conditions, and when he has produced a negative, not so much that looks well, but that yields prints with well-balanced lights and shades, he will then have the key to his conditions, and ought always to accomplish the like again by carefully employing the same conditions.

The foregoing is written for straight photography; i. e., the correct and realistic rendition of that which is before the lens. Those who strive for a spirit and effect not before them, but existing in their own minds — a concept of fancy and not a faithful rendition of the real — will not only modify the development, but will "doctor" the negative after it has been fixed.

THE REST IS SILENCE
ALEXANDER KEIGHLEY

Supplementary Positives

A Method to Modify Contrasts in a Negative

G. H. BETHELL

THE principle of the supplementary positive is one which was first introduced by Mr. Stieglitz for lantern-slide work, only in that case the slides themselves being positives, the supplementary plate was a negative. Still, the principle was there; and once that having been enunciated, its application to other forms of photographic work naturally followed. Perhaps, before going more into detail as to how supplementary positives can be made, and how they are used, it would be well to explain what a supplementary positive is.

Suppose we have a negative which has been properly exposed but considerably over-developed. It may give a strong contact-print in platinum or carbon, but it is much too harsh to use for enlarging. In the dark-room an ordinary plate is laid upon it, in a printing-frame, film to film, and an exposure is made, and a positive developed up, taking care to keep it very thin. When the positive is fixed, washed and dried, and placed in contact with the negative, the two images being carefully registered, the negative will look very slightly more opaque, but its contrasts will all be lessened.

It is easy to see why this is so. Wherever the negative is very dense there is little or no deposit on the positive. Wherever it is at all transparent there will be deposit on the positive, which will make that part less transparent.

So it follows that however thin the positive may be made, it is sure to increase the general opacity of the negative, although the contrast of the negative is lessened, and the resulting enlargement may in this manner be made as soft as we wish, even to the complete suppression of all the picture on it if we care to go to the *reductio ad absurdum*.

The power which such a supplementary positive conveys is one which does not seem to have been used as it might. It forms almost the only method by which we can locally modify contrasts on a negative that is to be enlarged. The use of matt varnish and of tissue-paper is not possible in such circumstances, as the hand-work would be magnified, and would show. But by making a supplementary positive we can get over all this very satisfactorily.

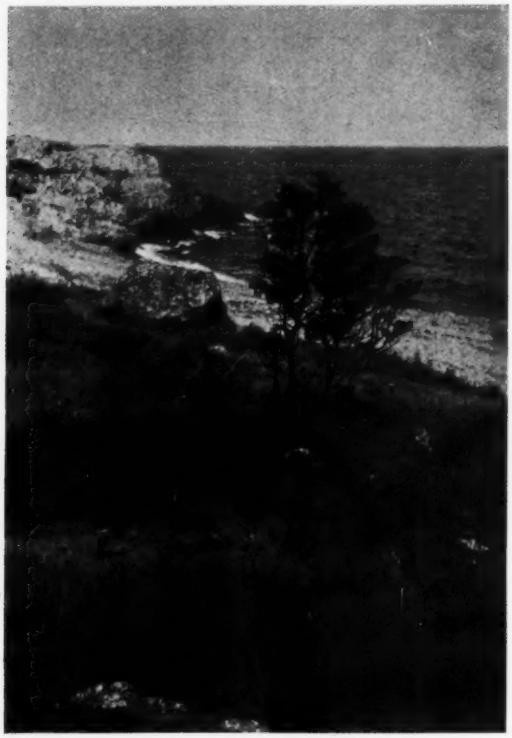
If there is any part to be softened we can effect it by taking the positive and reducing all the other parts with ferricyanide and hypo, until there is no image left upon them at all. This is easily done by applying the reducer with a brush, holding the positive near a tap with running water, and slipping it under the tap from time to time to prevent the action of the reducer from spreading. Any hard lines in the reduction should be softened by going over them with a brush with dilute reducer.

It is also possible sometimes to follow details of the picture, reducing right up to the edge of the detail, and letting its boundary form the boundary-line of the reduction. To do this, the reduction should be effected upon the positive while its film is dry, placing it level on a sheet of white paper, and following the outlines carefully with a brush. All the little irregularities of the outline should be dealt with first, and when these are represented by clear glass the bigger areas may be reduced. Unless the positive is too dense altogether, there is not much fear of the outline of the reduction showing in the enlargement.

A little thought will show the photographer that it is possible to control not only the extent of the alteration introduced by the supplementary positive, but also to control its character.

For example: if the exposure of the positive is kept short, but the develop-

AWAY ALOFT
F. J. MORTIMER, F. R. P. S.



THE LONE CEDAR E. M. ASTLE

ment is pushed on, we shall get a positive that is similar in character to an under-exposed negative; that is to say, it will have a good deal of vigor in the parts which lie under the shadow-parts of the negative, but the high-lights of the negative — that is to say, the shadows of the positive — will be represented by clear glass. Such a positive, while exercising very little effect on the high-lights of the negative to which it is applied, will make the shadows appear less heavy in the print, although it will not increase the detail visible in them.

On the other hand, by giving a full exposure to the positive, and developing it lightly, we can get a result which will simply flatten the whole of the contrasts a little. The process will be found to be a very elastic one, and a few trials will serve to show better than any lengthy verbal description the uses to which the method can be put, and the way in which the positives can be varied to suit the requirements of each special case.

There is not much that need be said upon the details of making these supplementary positives, as the process is a very simple one. Any make of plate may be used, but the easiest will probably be found to be lantern or transparency-plates. My own are generally made upon the Ilford "black-tone" plates, which are bought ready backed. The developer used is hydroquinone, as this gives a fine black deposit, the density of which is

SUNSET LEONARD MISONNE

more easily judged than when the image has a brown or greenish-black color.

It is most important to give the plates a washing of at least a minute under the tap between development and fixing, or stains may result.

The tendency at first is to make the supplementary positive too vigorous. This is best avoided by having plenty of yellow light in the dark-room, and stopping development as soon as the plate, on looking down at it as it lies in the dish, appears to have about as much contrast as a good bromide print should possess. It is easier to judge in this way than by looking through the positive, which also would necessitate clearing off the backing, an operation more conveniently performed after development and fixation.

A supplementary positive is not so useful for contact-printing, as the thickness of the glass between the positive and the negative to which it is applied makes its action not so definite and precise; but there still are occasions where it may be found of use. For this purpose, in making the positive, the plate cannot be used backed, as its glass side, which should be carefully cleaned, has to go in contact with the film side of the negative. This gives an image which is slightly diffused in definition. The positive so obtained is attached with its film side in contact with the glass side of the negative, and to avoid any apparent want of registration the printing should be done in a well-diffused light.

I have succeeded very well in softening the contrasts of a negative in this way; but it is certainly easier to get a good result by using the positive in contact with the negative, film to film, and enlarging from the combination, as has been described above. It will be found that there is no difficulty in registering the two plates. They are merely held up to a good light and slid over one another until the fit is seen to be exact, and then bound together with gummed strips of paper.— *Photography and Focus.*

EDITORIAL

"To Stop Moving Pictures"

THE caption to this editorial is a head-line in an exchange which caught our eye, recently. We wondered what, in this land of the free, is to prevent a picture-dealer from disposing of his stock; but perhaps we were wrong and the statement referred to the moving of pictures in another sense; viz., in a wagon or van from one place to another, like furniture, pianos, etc. And yet there is a probability that the reporter had in mind the busybody who visits art-museums and disturbs the pictures on the walls. Mentioning the matter to a newspaper-man, a few days afterwards, we were at once set right, being informed that the head-line in question referred to an order of the Board of Aldermen of a certain city to stop the display of motion-pictures in a second-class vaudeville house.

How long will it be before writers for the press will realize that "motion" or "kinematograph" pictures is the proper designation of what they erroneously style "moving pictures"? But unless they make even this incorrect term a compound word there is room for ambiguity. As a matter of fact, kinematograph pictures, if properly projected, *do not move.* What is seen is a quick succession of stationary pictures — in reality lantern-views — which simulate motion; hence, "motion-pictures," if you please, gentlemen!

Guaranteeing Apparatus and Supplies

THE old-time mercantile expression, "Satisfaction guaranteed or money refunded," or the same thing in a modified form, is still popular with a large number of manufacturers and dealers. Unfortunately, the phrase has lost much of its force, because the guaranty of a certain class of merchants counts for little or nothing. These enterprising, but thoroughly mercenary, concerns have no intention whatever to satisfy a customer in case an article sold by them has proved unsatisfactory. They are always prepared to meet complaints, however just, with an explanation or argument by which they may avoid responsibility. Methods like this may ensure pecuniary profit, but they do not make for business-integrity.

A certain make of shutter, advertised far beyond its actual merits, and supported by testimonials mostly of a fictitious character, has proved to be a disappointment to many. We know of numerous instances in which this expensive and intricate shutter went out of commission at the critical moment. Several well-known pictorialists, having this particular make of shutter fitted to their favorite anastigmat lenses, found themselves in a serious predicament when, soon after their arrival in a foreign country, their costly exposing-device utterly failed to act! Consequently, the hapless camerists were obliged to purchase inferior cameras — the only kind available — rather than return empty-handed.

Another unwise investment is a certain type of reflecting-camera. The advertisements are plausible enough, but the workmanship of the camera is so inferior that no self-respecting dealer cares to be identified with it. In a case of this kind a guaranty is obviously valueless.

We have in mind, also, several dealers in second-hand cameras and lenses who advertise, quite ostentatiously, that everything they sell is absolutely guaranteed. This is ludicrous, to use a mild term, for these concerns themselves need to be guaranteed. Their business-standing is not enviable, and they can buy nothing except for cash. PHOTO-ERA does not include such firms among its advertisers, nor will it recommend them, publicly or privately.

A strictly high-class firm has no need to publish a guaranty in its advertisements. A well-deserved and permanent reputation for square dealing is the best asset of any

merchant or dealer, and it is something which his customers are always pleased to mention; while he whom a dealer has treated unfairly is not disposed to circulate the news of such an experience, lest it might impeach his sagacity; and thus the offending tradesman escapes undesirable publicity.

Untrustworthy Writers

RECKLESSNESS of statement often gets the mastery of the ambitious, but ill-equipped, writer for the photographic press, as was the case of a contributor to the house-organ of a well-known photographic supply-house. In urging his readers to become technically proficient in their work, he cited as an example of successful achievement the famous picture "Mona Lisa," by Leonardo da Vinci. Evidently our friend had not seen the original painting referred to; otherwise he would not have stated that it represented an attempt upon the part of the famous master to catch the witchery of the human smile. He then concluded by saying that, doubtless, no human hand could have exactly reproduced it again. All this was true of this wonderful masterpiece before it was hopelessly and completely ruined by the hand of the restorer.

John C. Van Dyke, the accurate and widely-recognized authority in art-matters, writes as follows about the present condition of "Mona Lisa":

"Ah, no! Many of the noblest and the best of pictures have been almost destroyed by time and bad restoration. The canvas which hangs upon the wall in a bright frame with a famous name attached is often only a pretense — a thing of shreds and patches. Let me begin at once to be specific. The 'Mona Lisa' is far removed from the picture Leonardo let pass from his hands. It is only a pale ghost of its former self. All the carnations of the face that Vasari tells us about have flown, and given place to leaden hues. The subtlety of the lights and shades, the flow of graceful contours, the beautiful drawing of the cheeks, the forehead and the throat, the charm of the costume and the perspective of the background — all have been worn away, almost scrubbed out of existence, by cleaners' hands and a what-not of chemicals. It is a wreck — a precious thing, to be sure, because we have so little left to us by Leonardo; but only a beautiful wreck!"

Beautified Reproductions of Works of Art

AMONG the anomalies of progress is the invasion by photographic retouching of the field of art. With this painters themselves have nothing to do. It is merely a desire of publishers to cater to the dear public — those lovers of pictures who lack understanding and discriminative judgment in art-matters. We refer to a series of photographic reproductions of famous paintings issued by a well-known European art-publishing house. The negatives of these copies have been so carefully retouched that every trace of character and expression has been obliterated. Those who have seen the original paintings in the National Gallery, and elsewhere, will remember that they exhibit the usual symptoms of age and neglect, such as paint-cracks and chromatic inequalities. In the photographic copies, above referred to, all these, together with the character and modeling of the original pictures, have been replaced by a surface which is perfectly smooth and meaningless. Of the reproductions which have been subjected to this beautifying-process may be mentioned such well-known subjects as "Innocence" and "Samuel," by Joshua Reynolds, and others of the English school. Not even the works of Rembrandt have been spared. Art-lovers and students who have never seen the original masterpieces should exercise caution in the selection of photographic reproductions, even from among those of European publishers.

Study of creations of art of glorious epochs teaches us that every work of art must be in harmony not only with received ideas but also with independent artistic ones.— PAUL MANTZ.

XUM

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Conducted by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department Address all such communications to Phil M. Riley, 383 Boylston Street, Boston

Green Tones on Cyko

AT times users of Cyko seem interested in producing a green tone, and we will mention a formula published in a recent magazine intended for bromide paper, but which we have tried in connection with Cyko and it seems to work satisfactorily. Three solutions are required, as follows:

Solution A

Potassium ferricyanide	77 grains
Ammonia	5 drops
Water	3½ ounces

Solution B

Ferric ammonium citrate	33 grains
Hydrochloric acid	80 minims
Water	3½ ounces

Solution C

Sodium sulphide	15.5 grains
Water	3½ ounces

Then add

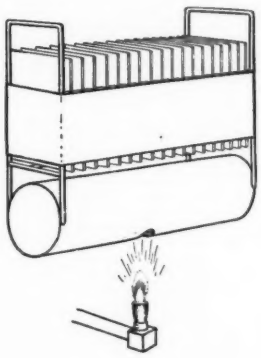
Hydrochloric acid	80 minims

This solution may become turbid, but no attention need be paid to that. The toning is done as follows: The print after washing is placed in Solution A until bleached through to a light brown. This usually takes from two to three minutes. The solution is now poured back into the bottle and the print washed until the whites are free from the yellow color of the ferricyanide. Upon the thoroughness of this washing the ultimate purity of the whites depends. Having washed the print, it is placed in Solution B for five minutes, then rinsed once or twice and transferred to Solution C for five minutes. A short washing completes the process. Should the whites of the print appear tinted pale blue while it is wet, this need cause no alarm, as the coloration practically disappears after drying.—*Portrait.* [While this is recommended for Cyko, it will probably yield good results with other gaslight papers.—P. M. R.]

A Simple Negative-Dryer

A CORRESPONDENT of *The British Journal of Photography* suggests the following method for drying negatives over night in damp weather:

"At this damp season a good way to ensure your negatives being dry and ready by the first thing in the morning following development is to hang on wall a wire negative rack to hold twenty-four negatives about a foot above a gas bracket, and between the two suspend from the rack horizontally an empty platinum can with cover on and a hole about the size of a penny cut in the middle of the under side just over the burner. By leaving a very small jet of gas burning all night under the hole it forms a hot-air chamber, and distributes heat equally the length of the rack. Of course, negatives must be wiped surface-dry with a chamois leather, as any spots of water left on would show.



"If center of can above the hole heats quicker than the ends a small, flat piece of tin slipped in over the hole compensates and distributes it better; one can soon regulate height of the flame to the greatest heat that can be safely used, and also the time wanted to dry."

Edinol-Hydro for Bromide Paper

MR. HARRY COUTANT, of the New York Camera Club, has worked out the following formula for Wellington bromide paper, which he finds exceptionally good.

Edinol-Hydroquinone Developer

Water	50 ounces
Edinol	½ ounce
Hydroquinone	1 "
Sodium sulphite, anhydrous	3½ ounces
Sulphite carbonate, anhydrous	6 "
Potassium bromide	60 grains

Dissolve in hot water about 180°. For use take one ounce to five ounces of water.

The Strength of Hypo

FIXING-BATHS for gaslight and bromide papers consist of a one to four solution of hypo in water plus a hardening-solution consisting of alum, acid (acetic or citric) and sodium sulphite. With ordinary crystal or pea hypo a one to four hypo solution will test 40 to 50 with the hydrometer, which are the limits within which one should work. With some brands of granulated hypo a one to four solution will test from 50 to 80, which is often the cause of prints bleaching in the fixing-bath. Different brands of hypo vary so in strength that it is economy to test the solution by hydrometer and add more water or hypo as indicated before adding the hardening-solution. Hydrometers cost but little and are of service in many cases. All soda salts vary in strength, and the hydrometer test is the only final criterion for the preservative and alkaline solutions of a developer. The use of the hydrometer makes for uniformity in results, especially in time or tank development.

Fixing P. O. P. Before Toning

IN an interesting series of experiments Messrs. Lumière and Seyewetz have proved quite conclusively that the most economical method of working the combined bath for printing-out papers consists in fixing the prints before toning. The method is not new, but its quantitative results have never before been so carefully tabulated. These tireless investigators have gone so far as to determine the exact quantity of gold required for toning one 5 x 7 print, which they find to be .008 of a grain. Their experiments, also, show the importance of the quantity of unused gold remaining in an exhausted toning-bath, since, even under the best conditions, one can use only two-thirds of the full amount in the formula.

It is well known that after about one hundred 5 x 7 prints have been toned in a combined bath containing 1¾ grains of gold chloride toning proceeds slowly, details are eaten out and the tone of the prints becomes reddish, although there is still a considerable amount of gold remaining in the bath. Ordinarily it is the custom to strengthen the bath by adding fresh solution, but such a course does not permit the gold, already inactive in the bath, to be utilized, and the further toning-action obtained is in fairly close proportion to the quantity of new bath added. There is no advantage in such a course, and, in fact, serious objection to it, because of the accumulation in the bath of double silver hyposulphites and, also, other substances, such as citric acid from the paper, all of which more or less quickly decompose the bath.

The experiments of Messrs. Lumière and Seyewetz have been conducted to find what method of using the combined bath permits the most complete utilization of gold without loss of quality to the toned prints. With this idea in mind they have ascertained the quantity of gold left in the bath after the toning-action has been effected in different ways upon the number of prints sufficient to exhaust the gold in the bath. In all of the experiments the following toning-solution was used:

Water	20 ounces
Hypo	5 "
Alum	130 grains
Lead acetate	18 "
Gold chloride (1 % solution)	1¼ ounce

This bath was used in two principal ways:

1. To tone the prints in succession.
2. To tone together several prints equal in number to those previously toned in succession.

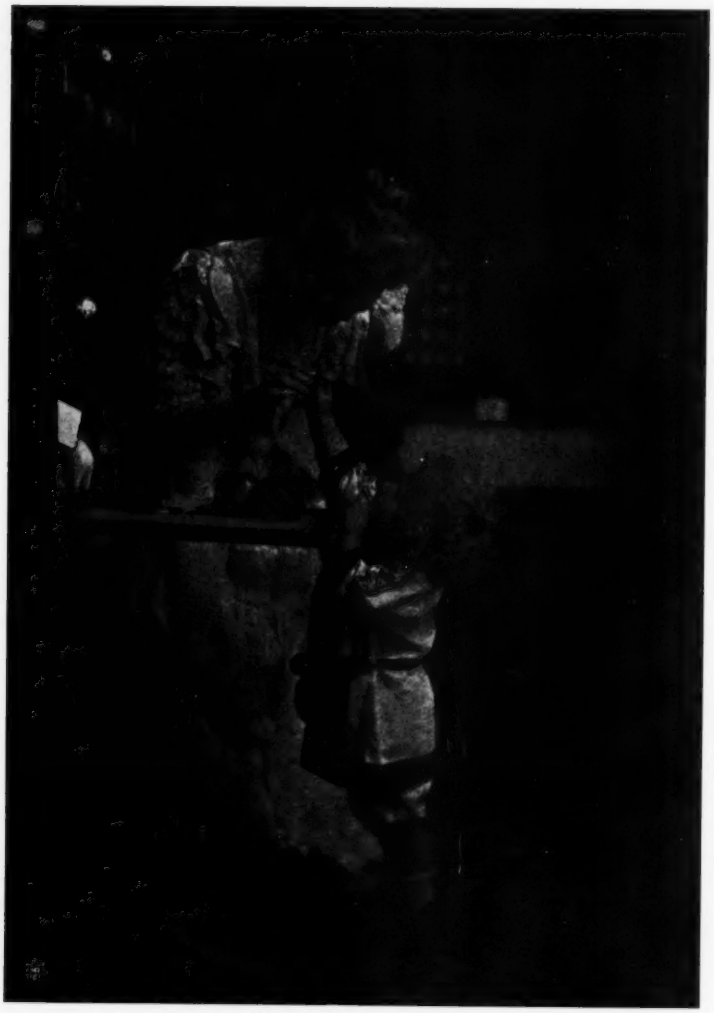
Further, each of these methods was employed in two different ways:

A. By toning and fixing in the combined bath in the ordinary way after having given the prints a preliminary washing in water.

B. By removing the silver salts from the prints by preliminary fixing before immersion in the combined bath.

The latter method has the advantage of preventing the accumulation of double silver hyposulphites in the bath, thus, as Messrs. Lumière have previously shown and as R. Namias has confirmed, removing one of the causes for the falling off in tone when treating a large number of prints. The results of the experiments are shown in the following table:

Method of using combined bath		No. of 5 x 7 prints toned in 100 ccs. toning-bath containing .0264 gm. gold	Time of toning of first print and last print	Proportion of gold used in toning compared with that put into bath
Prints toned and fixed in combined bath without previous fixing	*a*. Toned in succession	24	First print ..... 4 minutes Twenty-fourth print ... 25 minutes	60
	b. Toned together	24	..... 25 minutes	52
Prints first fixed in hypo and then toned in combined bath	*a*. Toned in succession	30	First print ..... 4 minutes Thirtieth print ..... 25 minutes	70
	b. Toned together	30	..... 25 minutes	63



THE TOY-CUPBOARD
HERMANN ZIESEMER

THE ROUND ROBIN GUILD

An Association of Amateur Photographers

Conducted by ELIZABETH FLINT WADE

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography, although advanced camerists are just as welcome and many are numbered among its members. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free and may be obtained by sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston. Send a stamp for complete prospectus.

Gum-Bichromate Printing

SECOND PAPER, THE PIGMENTS

As soon as one becomes somewhat expert in the coating, printing and developing of the gum-print he may venture more. Indeed, that is just what this elusive printing-process leads one on to do. First, in the matter of colors; for one is not content always to use the same color-pigments, though even if he does, no two prints are ever exactly alike.

In the many articles which have been written on gum-prints one finds very meager directions as to the mixing of the paints to produce certain tones; in fact, it is only now and then that one finds even a limited list of the pigments which will work well with this process. I have a hand-book on the subject which, while it is supposed to be a thorough guide, does not even mention what kind of pigment to use, nor even give hints about color. The writer evidently supposes his readers to be familiar with that important part of the process, or else to be able to mix their colors by intuition.

Among the pigments which I use are the following: Venetian red, Indian red, red ochre, crimson lake, vermilion, burnt umber and raw umber, burnt sienna and raw sienna, chrome yellow, Indian yellow, Vandyke brown, Prussian blue, bistre, warm sepia and lampblack.

The desired tones are obtained by mixing these colors in certain quantities.

The pigment is always added last to the gum-bichromate mixture, and, therefore, when trying for some particular tone, the different pigments should first be mixed by themselves, then a small quantity taken out, thinned with water and the color tried on a piece of paper. If it is not of the shade one is striving for then the pigments may be added until by trials on the paper the tone is satisfactory, and then they may be added to the gum-bichromate. If the colors do not rub well together then one can add a few drops of gum-solution to moisten the paints and make them assimilate.

Directions were given for mixing reds, which are the transparent colors, and which are, therefore, the best for the beginner to practise with. The browns are more or less opaque, yet they may be given a look of transparency if one is careful about the mixing and the spreading. Lampblack, judiciously used, will make very beautiful prints by itself alone. So will bistre, which is a brown pigment prepared from wood-soot, as lampblack is prepared from lamp-soot. Both are improved, however, by the addition of a bit of yellow to give a warmer tone to the print.

For a warm black use lampblack and burnt sienna, taking twice as much of the lampblack as of the sienna. This gives a tone which is specially good for certain portraits, and is also a most effective tone for a picture where trees showing bark and branch are depicted. It should not be used for pictures of the woods in winter, it not being quite cool enough in tone.

For warm browns mix Indian red and bistre, letting the bistre predominate. Most beautiful tones of brown, suitable for portrait or figure-work, are brought out by the combination of these two colors.

Cool browns are made by mixing a little Prussian blue with Vandyke brown. Sepias of all tones ranging from warm to the cool browns are made by mixing burnt umber with the different reds; for one coating taking Venetian red; for another, Indian red, etc.

Reddish browns are made by mixing bistre, burnt umber, Venetian red, and adding a touch of crimson lake.

For different shades of greens, use Prussian blue and the different yellows, according to the tone of green desired. More of the blue gives a deeper tone; more of the yellow gives the grass greens. Olive green is the result of adding a little lampblack to the Prussian blue and the yellow.

For blues, mix a little lampblack with the Prussian blue for cool tones, and a little Venetian red with the blue for warm tones.

Copper-color is sometimes a very pleasing color to use with a print designed for decorative work. This is obtained by mixing Venetian red, chrome yellow and lampblack. Sometimes a very pleasing tone is made by substituting bistre for the lampblack.

The main point in mixing the colors is to have them first thoroughly combined before adding them to the gum-bichromate; therefore one should always do as directed at the beginning of this paper — mix the colors and try them on a piece of paper before adding them to the gum-bichromate. Then, too, one should be generous

XUM

SECOND
PRIZE
HOME-SCENES

A MENTAL PROBLEM J. W. PONS

with his pigments, so that there will be plenty to add to the sensitizing-solution; for it is quite impossible to duplicate a tone exactly in case it is found one has not quite enough color for the amount of gum-bichromate mixed.

One who has done color-work will have no trouble in mixing his colors; but for those who have not — and their number far exceeds those who have — these directions for mixing the colors ought to be specially helpful.

The brush-manipulation of the print will be the next detail treated in the articles on gum-bichromate printing.

Weighing and Measuring

THE terms of a formula are often very confusing to the beginner who has little or possibly no knowledge of chemistry. For instance, there is the matter of solutions — the stock; the saturated; the per cent. etc., etc. These are designated by their specific names as if the merest tyro knew their meaning, when in fact the terms are so much Greek.

A formula calls for a certain amount of a per cent solution. It may be a five, eight, ten or twenty per cent solution, but the formula does not tell how to compound it. The matter is, however, a very simple one to understand. The per cent is reckoned exactly as one reckons per cent in computing interest. Ten per cent of one hundred is ten. If, therefore, your formula calls for a certain amount of a ten per cent solution of bromide of potassium, for example, your ten per cent solution would be made of ten ounces of the chemical to ninety of water; or to bring it down to usable proportions, one ounce of the chemical in ten ounces of water would constitute a ten per cent solution. If it were a twenty per cent solution then one would need double the quantity of the chemical and consequently less water, taking from the one hundred ounces twenty ounces of water, leaving eighty ounces; and made in quantities of ten ounces one would need two ounces of the chemical to eight ounces of water. If the formula called for a five per cent, then the amount of the chemical would be decreased, and instead of ten ounces to one hundred of water, one would use five ounces of the chemical and ninety-five of water, or nine and one-half ounces of water and half an ounce of the chemical. To our well-posted amateurs this may seem rather a lengthy explanation; but the editor finds the per cent solutions are one of the most puzzling things with which the beginner finds himself confronted.

A stock-solution is one that is made up in large quantities ready to use when needed, or is made in a concentrated form to be diluted with water when needed for use. Some chemicals keep very well when made up in stock-solutions, while others deteriorate in a short time.

A saturated solution is one which contains just as much of the chemical as the liquid is capable of dissolving and holding in solution. If one adds salt to water until it will dissolve no more, then the clear liquid would be a saturated solution of salt. In making up a saturated solution enough of the chemical should be added so that

SPECIAL PRIZE — SELF-PORTRAIT COMPETITION
J. WILL PALMER

FIRST
PRIZE
HOME-SCENES

ON THE STAIRWAY CHARLES H. FLOOD

there is a deposit at the bottom of the bottle or vessel in which it is stored. When it has stood for twenty-four hours to settle, the clear liquid is decanted off and this is the saturated solution.

The proportions of formulæ are not always given in the same terms. Sometimes they are given in grains and ounces; sometimes in drams and minims; sometimes in grams and cubic centimeters; and, most confusing of all, they are sometimes given in "parts." Chemicals are usually sold by avoirdupois weight. It has long been the aim of certain scientific men to do away with both apothecaries' and avoirdupois weights and adopt what is called the metric system of weights and measures. This system is legalized by Great Britain and by the United States, and is in actual use in every civilized country with the exception of Russia and Montenegro. It has not, however, been made a universal system, and our schoolbooks will still continue to instruct us in the apothecaries', the avoirdupois, and the Troy weight systems; so it would be a very good idea for the amateur to have at hand these tables when weighing and measuring his chemicals. If a printed leaflet is not to be had then copy the tables on a sheet of paper and tack it up in the workroom.

Going back to the metric system, we find that the unit of weight is the gram and the unit of liquid measure is the cubic centimeter. A gram is equal to fifteen and four-tenths grains. In the tables for general use the number of grams in an ounce is frequently given as thirty, though, to be strictly accurate, the avoirdupois has only about twenty-eight and one-half grams, while the heavier Troy ounce has over thirty-one. One very often finds a formula given in grams and centimeters and, his graduate not being marked for this system of measuring, it is a pretty piece of knowledge to be able to under-

THIRD
PRIZE
HOME-SCENES

THE PICTURE-BOOK D. R. BATTLES

stand how to turn these terms into grains and ounces. As just said, the gram is equal to fifteen and four-tenths grains, but in converting grams to grains one uses the fraction one-half instead of the four-tenths. Multiply the number of grams by 15½ (the number of grains in a gram) and the result will be as many grains as is required by the formula. To convert cubic centimeters to ounces, divide the number of cubic centimeters in the formula by the number of cubic centimeters in an ounce, which is thirty, and the quotient will be the number of ounces.

When the proportions of a formula are expressed in parts, which is a very unsatisfactory way of having a formula given, then substitute grains or ounces and fractions of an ounce for the parts. Suppose you had a formula for a restrainer which called for 4,320 parts of water and 480 parts of bromide of potassium. Simply divide these numbers by the number of grains in an ounce, which would give, in this case, nine ounces of water and one ounce of bromide of potassium.

In making up a formula one should read the directions and follow them faithfully, especially in the adding of the chemicals. They should always be mixed in the order given, not all dumped in together haphazard. Then each chemical should be dissolved, or almost so, before the next is added. During the mixing the solution should be stirred with a glass rod. In some formulæ one finds the proportions of the chemicals given and the directions say to add enough water to make the solution up to a certain number of ounces. In such a formula the chemicals are weighed, then the water added until the solution reaches the required number of ounces.

Care in weighing and mixing one's formulæ is one way to ensure success.

Downhill Perspective

JUDGING from the number of letters that have come to the editor in regard to our April competition, the subject is one which puzzles many of our members. Downhill perspective is exactly what its name implies — showing in a photograph the effect of looking down a hill, or looking down from an eminence.

Uphill perspective is easy to reproduce because the line of sight is naturally low and the objects seen are above this line rather than below. Doubtless most of our members have seen pictures taken from balloons or from cameras sent up into the air with kites. It is almost impossible to look at these pictures and realize that one is looking down on the earth; for the reason that there is nothing in the picture to emphasize the fact. It is very easy to photograph a road winding up a hill and convey in the picture the fact that the road really runs up hill, but it is quite another proposition to go to the top of the hill and so photograph the road running down the hill that the picture conveys the impression.

To throw light on this subject further let me describe two pictures of excellent downhill perspective The first shows a road winding across a plain and turning and ascending the hill at the top of which the spectator is supposed to be standing. The horizon-line is low and there are long, low clouds in the sky, which emphasize the effect of distance. Two-thirds of the way up the hill is seen a horse and carriage, while in the near foreground is a low, flat stone wall. The picture has been so taken that one seems to be looking down on these planes, the wall and the top of the carriage, and this gives the impression in the picture that one is looking downhill.

In the September number of PHOTO-ERA for 1908 will be found a most admirable study of downhill perspective. It was taken by our editor-in-chief, Mr. Wilfred A. French, and is a view of Lugano, Italy. The picture is taken on an eminence, and in the immediate foreground is the roof of a building at the left of which is a tall tower. One looks over the plane of the roof across the valley and the town, way beyond to the mountains in the distance. This picture, almost more than any other, gives the impression of looking down on the scene. The article in which the picture appears is by Anthony Guest, and the subject is "Aids to Downhill Perspective." It might be well for our members to look up this number and see the picture and read the article. The crux of the whole matter is to have the camera level, whether photographing uphill or downhill perspective, so that the plate or film shall be plumb. If necessary, the rising and falling front may be used to advantage. In securing the effect of downhill perspective a prominent line of sight, furnished by an object in the foreground, is of the utmost assistance, serving to separate the different planes and to give the distance below its relative position in the composition.

The Round Robin Guild Monthly Competitions

Closing the last day of every month.

Address all prints for competition to PHOTO-ERA, *The Round Robin Guild Competition, 383 Boylston Street, Boston.*

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.
Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in books, magazines, enlargements, mounts, photographic materials or any article of a photographic or art nature which can be bought for the amount of the prize won.

Rules

1. These competitions are free and open to all photographers, whether or not subscribers to PHOTO-ERA.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor, and must be artistically mounted.

3. The right is reserved to withhold from the competitions all prints not up to the PHOTO-ERA standard.

4. *A package of prints will not be considered eligible unless accompanied by return-postage at the rate of one cent for each two ounces or fraction.*

5. *Each print entered must bear the maker's name, address, Guild number, the title of the picture and the month in which the competition occurs, and should be accompanied by a letter* SENT SEPARATELY, *giving full particulars of date, light, plate or film, stop, exposure, developer and printing-process.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA. If suitable, they will be reproduced, full credit in each case being given to the maker.

Subjects for Competition

March — "The Seasons." Closes April 30.
April — "Downhill Perspective." Closes May 31.
May — "Sunlight and Shadow." Closes June 30.
June — "Landscapes with Figures." Closes July 31.
July — "Marines." Closes August 31.
August — "In the Country." Closes September 30.
September — "General." Closes October 31.
October — "Scenic Beauties of America." Closes November 30.

Awards —Self-Portraits

Special Prizes: J. Will Palmer and Paul Lewis Anderson.

Honorable Mention: T. W. Kilmer, John J. Reilly, Richard Pertuch, Beatrice B. Bell, Joseph M. Rogers, R. C. Watkins, John Schork.

BEGINNER'S COLUMN

Quarterly Contests for Beginners

In these contests all Guild members are eligible EXCEPT *those who have received Guild prizes in the past. Aside from this restriction, the rules which govern the monthly competitions will be in force here and the prizes will be payable in the same manner.*

All prints submitted, except prize-winners, will be returned if postage is sent.

PRIZES

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.
Honorable Mention: Those whose work is worthy will be given Honorable Mention.

Subjects for Competition

SNOW-PICTURES — CLOSES APRIL 15, 1910

Here is presented a very wide field, so that nearly every camerist may enter one print, at least. The pictures may be snow-covered landscapes in all conditions of weather, park-scenes, outdoor sports on the snow or ice and a variety of other subjects, including human life or not.

SOUVENIR-PHOTOGRAPHS—CLOSES JULY 15, 1910

It is intended that this competition shall include photographs made as souvenirs while away from home, whether in one's own country or abroad, or only on a short vacation-trip. Thus they will portray objects of historic or other interest, and incidents worthy to be recorded. Figures may or may not be included.

FAVORITE PETS — CLOSES OCT. 15, 1910

The subject of this competition seems self-explanatory, consisting, as it does, of dogs, cats, monkeys, rabbits, birds, etc., and tamed wild animals.

Red Tones on P. O. P.

RICH reds resembling carbons in tone may be made on printing-out paper by the use of chloro-platinite for toning. The solution is made of two grains of potassium chloro-platinite and eight ounces of water, to which are added eight drops of nitric acid. The prints are first placed in a salt-bath, where they are thoroughly wetted. They are then transferred to the toning-bath and toned until the desired color is reached; then rinsed and placed in a weak fixing-bath. The action of the bath helps to deepen the red tone of the print. If one has a portrait-negative with delicate detail, the figure rather small than otherwise, one may make a charming print by using this toning-solution to get the reddish tone; then squeegee the print to a piece of ground-glass, which produces a fine grain and seems to give a softening effect to the picture. Collodion paper treated in this fashion gives very beautiful prints unlike anything else in the way of printing-out papers.

Awards — Home-Scenes

First Prize: Charles H. Flood.
Second Prize: J. W. Pons.
Third Prize: D. R. Battles.
Honorable Mention: William Spanton, Auguste Kastendieck, Mary V. Fontaine, Constance Durrant.

Meritorious work was submitted by J. W. Newton, John Dove, Will F. Helwig, J. D. Reid, F. M. R. Robuts, Alice Margaret Dickinson, Clara Jacobson, Anna M. Shurtleff, Nick Bruehl, George P. Russell, W. C. Hodges, Mrs. H. R. Davis, Florence Marie Robuts, S. D. Edwards, George W. Heydenreich, Robert Ervien, Robert R. Lucas, Emilie Buzby, Mrs. Alice H. Knight, E. P. James, U. Le Roi Upson, Everett E. Neukom, W. B. Welles.

"How small is he who has to lower others in order to elevate himself!"

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

A. KALISH.— **Prints in Albums.** One way of putting prints into an album with soft leaves, and probably also the most satisfactory for such an album, is to cut little slashes at points which correspond to the size of the print and slip the corners of the prints into these slits, after the manner of a post-card album. I have just seen a collection of foreign prints of all sizes mounted this way in soft-leaved albums and the arrangement was a great success. Your questions in regard to ray-screens have been answered by mail.

A. ANDERSON.— **Metol-Hydro for Portraiture.** A formula for metol-hydroquinone developer will be found in the article on metol given in a recent number. Look for it under the head of developers. You will find this one of the most satisfactory developers for portrait-work, as it gives soft contrasts and brings out the detail, producing a negative of most excellent printing-qualities. You will also find it much cheaper to prepare your own developing-powders rather than to buy those already mixed as you have been doing.

RICHARD RONAY. — **Transfer-Medium.** The formula for a water-proof adhesive has been sent you by mail. Have you ever tried the new transfer-medium, Le Bo, advertised in our columns? You do not state to what use you wish to put your transferred prints — you might look up this preparation and perhaps it would answer your purpose admirably.

GEORGE INGALLS.— **Local Intensification.** Do not use vaseline for brushing over a film to protect the action of the intensifier on certain parts during local development. Use glycerine instead, as glycerine is soluble in water and is easily removed by soaking the film a few minutes in water, whereas to remove the greasy vaseline you would either have to use soap or cut the grease with alcohol or gasoline.

J. J. GREEN.— **Hardening Films.** A formalin bath for hardening film is made of one ounce of formalin to ten of water. The film should be left in this solution for five minutes, then drained and dried. The solution may be used repeatedly. **Stopping Development.** To stop development of a plate at once, place it in a citric acid bath, five grains of the acid to an ounce of water.

JULIUS D.— **Coloring Glossy Prints.** To make colors take on glossy prints use twenty grains of what is called ox-gall paste, five ounces of water, and one ounce of spirits. Dissolve the paste in the spirits, add the water and brush the mixture over the prints. A thin wash of gelatine will sometimes be sufficient to make the paint flow evenly on the surface of the prints. As a general thing it is wiser to leave prints in their natural color, in monochrome, rather than to seek to improve them by coloring. If colors are used they should be the transparent colors and should be used very sparingly.

BERTHA B.— **The Use of Litmus-Paper.** Red litmus-paper is used in testing for alkalies. When a piece of red litmus-paper is placed in a solution which is too strong the paper turns blue. Blue litmus-paper is used in testing for acids, the blue paper turning red in the solution if too strong of acid.

D. L. H.— **Scales for Weighing.** A set of photographic scales may be bought as low as fifty cents; but if one is planning a great deal of measuring and weighing, then a set of scales which is strictly accurate to the fraction of a grain should be chosen, such a set costing one dollar and a half. These scales are very convenient, for when not in use they fold into small compass and fit into a box, thus not only keeping them out of the way, but also preserving them from the dust.

MILES G.— **Intensification with Silver and Copper.** To intensify a plate with copper sulphate make up a solution of copper sulphate, allowing two hundred grains of the copper to each ounce of water. Dissolve in hot water. Make up another solution composed of three and one-third ounces of bromide of potassium dissolved in eight ounces of water. To use, take equal parts of each of these solutions, place the plate face up in a tray and turn enough of the solution over it to cover it well. The plate must be left in the solution until the whitened image may be seen on the back of the plate. Wash for five minutes, then place in a tray containing a solution of nitrate of silver of the strength of forty grains to each ounce of water. This will blacken the image and the result will be a plate of good printing-quality provided the image had sufficient contrast at the beginning. If it is not dense enough after the bath in the silver-solution then develop in any good developer used for an ordinary negative. This method of intensification is to be preferred to the mercuric-chloride process, for the latter is not always a permanent success.

CELIA N. C.— **Rodinal Used Factorially.** The factor for rodinal is 40, which, as doubtless you know, means that when using this developer factorially you must develop it forty times as long as the time which it took to get the first appearance of the image. If the image came up in five seconds then the negative must be developed for a total of two hundred seconds (5 x 40), which is supposed to be the time at which all detail possible to bring out in the negative will have appeared.

SETH KIBBE.— **Distances in Lantern-Projection.** To calculate the approximate distance at which to place a lantern from the screen in order to get a picture of a certain size, first find the focal length of your lens, convert all other values to inches, and multiply the width of the image desired on the screen by the focal length of the lens and divide by the width of the lantern-slide opening.

GRAHAM KING.— **Removing Ink from Prints.** Your platinum prints which have been stained with ink may be cleaned by an application of a weak solution of oxalic acid. Of course the permanency of the stain depends entirely on the chemical nature of the ink. If it is one of the aniline inks it may be removed by using a five per cent solution of sodium sulphite made slightly acid with a few drops of citric acid. A solution of metabisulphite may also be used with good results. If the ink is one of the water-proof inks, or one of the jet black writing-inks, it is almost impossible to remove the stain. Unless the print is specially valuable perhaps the best way out of the difficulty would be to make a fresh print; that is, if the print is quite badly stained.

ELLIS BARNES.— **Cleaning Glass and Porcelain.** An effectual solution for cleaning photographic glass and porcelain dishes which have become badly discolored is made of one ounce of bichromate of potash dissolved in ten ounces of water. When thoroughly dissolved add slowly one ounce of commercial sulphuric acid. Stir with a glass rod and be very careful not to get any of the acid on the hands or clothing, as it burns quickly. In cleaning the trays use a swab tied to a stick, and throw away after use. The best plan is to clean one's trays with soap and water each time they are used, for the once

using cleans off very easily and avoids stains which have become set and impossible to remove. Stains from the developing of gaslight prints may be removed by substituting nitric acid in place of sulphuric. The sulphuric acid solution will also clean bottles stained from the storing of chemicals.

DOROTHY MILLS.—**Toning Bromides with Copper.** You can tone your bromide prints a very pleasing color by using copper as the toning-agent. A formula which gives excellent results is made up as follows: one-half ounce of potassium citrate, twenty-seven grains of sulphate of copper, forty-two grains of ferricyanide of potassium, and five ounces of water. Dissolve in the order given. If the solution is not clear, clear it by filtering. Moisten the bromide print in water so that it is thoroughly wet, then tone to the desired color in this solution. Wash well and dry.

MARION B.— **Printing from Thin Negatives.** When printing from a thin negative one should either print in the shade or else shield the negative from the sunlight by covering with either a sheet of ground-glass or else with a box-cover from which the top has been removed and the opening covered with a thin sheet of tissue-paper. Onion-skin paper is better than the ordinary tissue-paper, as it is free from unevenness and thus ensures evenness in the printing. Sometimes for very thin negatives printing through a green glass of light color will produce much better results than either of the ways suggested.

L. H. TRINE.— **Groups by Flashlight.** Making groups by flashlight cannot be said to be one of the most satisfactory ways of photographing several persons, for the reason that some faces are sure to be stronger lighted than others and there is a lack of harmony in the picture. If, however, you wish to make a trial arrange your sitters so that they are as nearly on the same plane as possible, have the camera placed so that the lens points to the center of the group, and in arranging the light see that it is at least at a point two-thirds the height of the group when seated. If the flash is set off at too low a point the shadows will be thrown upward and there will be distortion in consequence, while if it is placed too high the lower part of the picture will be too dark. Leave the lights burning in the room both before and during the exposure.

HENRY P. G.— **Birds.** Yes, it is quite time to begin one's bird-studies for the season, and one may learn where certain nests are situated simply by going to the woods, remaining quiet a short time and noting carefully the manœuvers of the feathered inhabitants. One may visit a nest from the time of the laying of its foundations till the hatching of the young birds, taking pains never to make a sudden or rough movement or in any way to molest the nest. One's costume, too, should be subdued in color, and if one goes regularly once a day at about the same time the birds become accustomed to the visits and learn to feel that they will suffer no harm. One of the pleasantest of summer pastimes is the studying and photographing of birds, and while much has been done in this line there are many species yet unphotographed intimately. Then, besides the pleasure, there is always a sale for interesting pictures of bird-life.

Print-Criticism

Address all prints for criticism, enclosing return postage at the rate of one cent for each two ounces or fraction thereof, to ELIZABETH FLINT WADE, *321 Hudson Street, Buffalo, N. Y. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop, exposure, developer and printing-process.*

"THE PARK IN WINTER."— This picture represents a view across a city park in early winter, the ground being lightly covered with snow and some of the trees yet retaining portions of their foliage. A path begins at the lower left-hand corner and winds diagonally across the picture till lost to view among the trees. In the immediate foreground at the right is seen a park bench, and the first impression is that there is a small creek or long, narrow ditch of water with a fence at the further edge. A closer study, however, shows that the seeming fence is really a bench. Now whether this was the skill of the artist or a happy accident in so bringing the bench into such a position as to produce this impression the artist does not say; but certainly were it not for this same bench the picture would be nothing more than a very ordinary scene which one sees every day in such surroundings. The picture emphasizes the fact that an effective object in the foreground, skilfully placed, makes a picture, while the lack of it mars a picture. The member who sent this print said in his letter that he was anxious to know whether his work had artistic merit, as he was anxious to excel in this direction. The print submitted of so commonplace a subject so well treated shows that our member is on the right road to attain artistic success. The print is not mounted, and is toned in a soft gray and is without strong contrasts, though the shadows lying across the snow show that the sun was shining.

"BARBARA," B. T. E.— This is a study rather than a portrait. It is the picture of a young woman with hair unbound and face turned to show a three-quarter view. The hair curves from the center of the forehead to the corner of the eye, then sweeps down the cheek to just below the ear, which it covers, and falls in soft masses to the waist. The gaze is downward, as if the subject were thinking deeply, or musing on some absorbing subject. The lights and shadows in this picture are exceptionally well managed, with the exception of a high-light on the nose, which instinctively attracts the eye,

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and one sees the rest of the picture in the gradation of light rather than seeing it as a whole, as would be the case were it not for the obtrusive high-light. The drapery or gown is of some soft gray material, and instead of attempting to drape the cloth, which so many try and fail, the stuff has been made into a simple gown in a most admirable design for a picture of this kind. The hair is very well done, it having a soft, loose appearance, showing elusive lights and shadows, and were it not for the high-light in the wrong place "Barbara" would be a specially pleasing picture. The remedy for the high-light is to paint it out on the print.

"WINTER STUDIES," S. H. F.— This member of our Guild, whose home is in Oregon, sends three studies of winter. One shows a quantity of birches — at least, they look like white birches — some standing straight and erect, and one or two thrown down or leaning at an angle. At a little to the right of the center is a very tiny fall of water, and glimpses of the creek which produces it are seen through the shrubbery. This picture is quite sharp and distinct, and is an admirable study in lines. Another picture taken from the same point of view, or else printed through some transposing-medium, is too much out of focus and has a blurred look. The other picture shows a growth of very young saplings, and is not of any artistic merit, but is interesting as showing how very dense these young trees can grow, and also is an evidence that while our forests are being denuded there are new forests springing up to take their places. A fourth picture sent by this member is a summer-picture, and shows a young woman seated in a hammock which is swung from the giant branches of what is evidently a patriarch of a tree. The subject is trite, but the picture of the tree itself is very interesting. This print is toned in gray and mounted on a brown mount, which does not bring out the print as well as if it were mounted on a gray or on a creamy white. All of the prints are very well taken and well composed.

Plate-Speeds for Exposure-Guide on Opposite Page

Class 1/3

Lumière Sigma
Lumière Non-Halation Sigma

Class 1/2

Barnet Super-Speed Ortho

Class 3/4

Barnet Red Seal
Imperial Flashlight

Class 1

American
Ansco Film, N. C. and Vidil
Barnet Extra Rapid
Barnet Ortho Extra Rapid
Barnet Studio
Cramer Crown
Cramer Crown Non-Halation
Cramer Instantaneous Iso
Cramer Inst. Iso Non-Halation
Cramer Isonon
Cramer Trichromatic
Ensign Film
Hammer Special Extra Fast
Ilford Monarch
Ilford Zenith
Imperial Special Sensitive
Imperial Non-Filter
Imperial Orthochrome Special Sensitive
Kodak N. C. Film
Kodoid
Lumière Film
Magnet
Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan
Wellington Extra Speedy

Class 1 1/4

Cramer Banner X
Cramer Banner X Non-Halation
Eastman Extra Rapid
Hammer Extra Fast
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 26x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon
Wellington Speedy
Wellington Film

Class 1 1/2

Lumière Ortho A
Lumière Ortho B

Class 2

Cramer Medium Iso
Cramer Medium Iso Non-Halation
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Wellington Iso Speedy

Class 2 1/2

Barnet Medium
Barnet Ortho Medium
Cramer Anchor
Hammer Fast
Seed 23
Lumière Panchro C

Class 3

Wellington Landscape

Class 4

Stanley Commercial
Ilford Chromatic
Ilford Empress

Class 5

Cramer Commercial
Hammer Slow
Hammer Slow Ortho
Wellington Ortho Process

Class 8

Cramer Slow Iso
Cramer Slow Iso Non-Halation
Ilford Ordinary

Class 12

Cramer Contrast
Ilford Half-Tone
Seed Process

Class 100

Lumière Autochrome

XUM

The Round Robin Guild Exposure-Guide For April

COMPILED BY PHIL M. RILEY

UNDER this caption a brief table of exposures will be given in each issue for the guidance of Guild members during the following month. While the figures are indicative only, they will be found approximately accurate for the assumed conditions they have been applied to. If the exposure-times given are not considered imperative, but as suggestions, possibly to be varied slightly at the discretion of the worker, these tables will prove of great benefit to all who use them.

The table below gives the exposures required by the different subjects and plates mentioned during the month of April on any fine day between 10 A.M. and 2 P.M., when the sun is shining brightly and the lens is working at f/8, or U. S. No. 4.

Double the exposure if the sun is obscured but the light is fairly bright, or if f/11, U. S. No. 8, is used; also from 8 to 9 A.M. and 3 to 4 P.M. Treble it when the light is rather dull, and from 7 to 8 A.M. and 4 to 5 P.M. Increase it four times when there are heavy clouds and very dull light, or if f/16, U. S. No. 16, is used. For f/5.6, U. S. No. 2, give half. From 9 to 10 A.M. and 2 to 3 P.M. increase the exposure one-fourth. From 6 to 7 A.M. and 5 to 6 P.M. increase it five times.

SUBJECTS	PLATES (List on Opposite Page)											
	Class ½	Class 1	Class 1¼	Class 1½	Class 2	Class 2½	Class 4	Class 5	Class 6	Class 8	Class 12	Class 100
Studies of sky and fleecy clouds	1/1280	1/640	1/512	1/400	1/320	1/256	1/160	1/128	1/100	1/90	1/50	1/6
Open views of sea and sky; very distant landscapes; studies of rather heavy clouds	1/640	1/320	1/256	1/200	1/160	1/128	1/80	1/64	1/50	1/40	1/25	1/3
Open landscapes without foreground; open beach, harbor and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds	1/320	1/160	1/128	1/100	1/80	1/64	1/40	1/32	1/25	1/20	1/12	2/3
Average landscapes with light foreground; river-scenes; figure-studies in the open; light-colored buildings and monuments; wet street-scenes	1/160	1/80	1/64	1/50	1/40	1/32	1/20	1/16	1/12	1/10	1/6	1 1/3
Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving-objects at least thirty feet away	1/80	1/40	1/32	1/25	1/20	1/16	1/10	1/8	1/6	1/5	1/3	2 2/3
Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red brick buildings and other dark objects; groups outdoors	1/40	1/20	1/16	1/12	1/10	1/8	1/5	1/4	1/3	2/5	3/5	5 1/3
Portraits outdoors in the shade; very dark near objects	1/20	1/10	1/8	1/6	1/5	1/4	2/5	1/2	3/5	4/5	1 1/5	11
Badly-lighted river-banks, ravines, glades and under the trees	1/10	1/5	1/4	1 3	2/5	1/2	4/5	1	1 1/5	1 3/5	2 2/5	21
Average indoor portraits in well-lighted room, light surroundings, big window and white reflector	3/10	3/5	3/4	1	1 1/5	1 1/2	2 2/5	3	3 3/5	4 4/5	7 1/5	64

In order to make the exposures as accurate as possible after the final multiplications, all fractions accompanying whole numbers have been allowed to remain in this table, except when the whole numbers were so large that fractions might be disregarded as negligible. In such cases approximate figures have been given. Shutters will not always give the exact exposure required, but the nearest speed may be used if it is approximately correct. When the nearest speed is too short open the diaphragm a little; when too long, close it a little. Let the exposure be a little too long rather than too short, and the more contrast there is in the subject the more it may be over-timed. Over-exposure, unless excessive, can be controlled in development, but under-exposure will not give a satisfactory negative.

XUM

OUR ILLUSTRATIONS

OUR charming Easter cover-design is by Rudolf Dührkoop. The love of the mother and innocence of the child are in superb contrast, and one could not better typify the purity of Christ.

Arthur Marshall's "Away to the West" possesses the "bigness" of treatment more characteristic of European than English work. It is decidedly unusual and thoroughly pleasing. One can readily see that the faint breeze moves the heavy craft but slowly. Breadth of treatment, strong lines and good spacing have done much to improve an already attractive subject. No data.

Separation of planes, the importance of which has been ably set forth in this issue by Walter Zimmerman, is seen in "The Parkway in October," by Phil M. Riley, and "The Harvest," by Wilfred A. French. In both the effect has been secured by placing prominent objects in the foreground on which the sharpest focus is located, so that definition as well as perspective does its share. A slight mist has also been of assistance. "The Parkway in October." Data: 3A Kodak, 3¼ x 5½, B. & L. rapid rectilinear lens, 6½-inch focus, f/8; October, 9.30 A.M.; sun through mist; $\frac{1}{25}$ second exposure; Kodak film; pyro-metol tank development; enlargement on Eastman Velvet Bromide.

"The Harvest." Data: Voigtländer & Sohn's Extra Rapid Euryscope, No. 2, Series 4, focus 10 inches, stop f/11; exposure, ½ second; weather cloudy; Cramer Banner plate; pyro developer; W. & C. Platinotype print.

Another example of differentiation of planes is "Golfing at St. Moritz," by Walter Zimmerman. Here the relative sizes of the figures are in a measure responsible for the effect, while the distant mountains and downhill perspective, emphasized by the prominent line of sight, are also important elements. The scene is a charming one, well composed and broad in treatment. No data are available.

Both of Mr. Wilfred H. Schoff's pictures are referred to in his article, particularly with respect to the camera used. "The Hudson-Fulton Parade" depicts a news-event of great interest to the whole country at the time it occurred. The print is used here in contrast to "Smoky Afternoon, New York Harbor," to illustrate the possibilities of a small camera. The former shows pure technical, record-of-fact work, while the latter is wholly along pictorial lines. Data: both subjects were made with a No. 0 Kodak, modified as described in Mr. Schoff's article; Kodak film 1⅝ x 2½; Beck Isostigmar lens, Series 1, 3-inch focus, f/4.5; $\frac{1}{100}$ second exposure; metol-hydro developer; enlargement on Eastman Enameled Bromide. The parade was made in September, poor light, about 2 P.M.; the harbor-scene, in July, dim and smoky, at 4.30 P.M.

"Gypsies," by H. Berssenbrugge, is one of the most interesting character-studies in the American Salon this year. Although a straight photograph, strongly lighted by a bright sun overhead, the result is pleasing as showing these people in the open, where we are in the habit of seeing them. In any other surroundings they would seem out of place. The line above the boy's head is unfortunate and could be spotted out on the negative. No data are available.

In "James Street, Lincoln, England," Bertram Cox gives us an excellent example of spacing and arrangement of masses. Particularly interesting is the effect of the light tower against the darker sky. Data: 4 x 5 Sanderson camera; Aldis Anastigmatic lens, Series II, 7¼-inch focus, f/8; 3½-times light-filter; June, 7.30 P.M., setting sun giving almost horizontal lighting; 1½ seconds' exposure; Wratten and Wainwright Panchromatic Backed plate; Rodinal developer 1 in 30; Griffin's Chamois Lingrain print, warm toned to give the glowing effect of sunlight on stone.

"At the Open Door" is worthy to accompany the many fine things by E. T. Holding. The figure dominates the scene in spite of several distracting centers of interest, and the effect of sunlight contrasted with shadow throughout the picture is especially delightful. Undoubtedly, the interior appears too dim; but a compromise was necessary somewhere and the result causes the sunlight to seem all the brighter. Data: 10 x 12 Freed camera; Ross lens, f/5.6; August, 11 A.M.; sunlight; 3 seconds' exposure; Ilford Special Rapid plate; pyro-soda developer; platinum print from an untouched negative.

Among the few recent works of its kind which is thoroughly pleasing may be mentioned "Nude Study," by Mrs. Jeanne E. Bennett. In no sense does it offend, there being not the slightest evidence of self-consciousness or personality of the model. One can consider it simply for its grace of line and beauty of modeling. Data: Voigtländer & Sohn's 8 x 10 camera and Euryscope lens, used wide open; May, 5 P.M.; pyro developer; W. & C. Platinotype print.

"The Rest Is Silence," by Alexander Keighley, is an impressive interpretation of a very solemn subject. The downhill perspective plays an important part in the idea conveyed, as do the cypresses, which one always associates with things funereal; but all this is counteracted in part by the brightness of the clouds and distant landscape, symbols of hope beyond the silence. Data are withheld by the maker.

F. J. Mortimer, who holds an unrivaled position as a photographer of marine-subjects, presents something out of the ordinary in "Away Aloft." While at first glance it may seem a mere snap-shot, it is really much more in treatment and in significance. Bromide as a printing-

medium has, we believe, been effective in this case to give just the right value to clouds and sea. No data are available.

The soft, though cleanly-cut pictures of E. M. Astle are already familiar to our readers, but most of the subjects shown have been of a nearer, more intimate nature and have depended to a certain extent upon atmospheric effect. "The Lone Cedar" presents a more open scene, with its chief interest in the foreground but a strong complement in the background. The stunted tree is well placed and the distant shore-line attractive. No better background than the sea could be found to assist in conveying the idea of loneliness. Data: July, 3 P.M.; sunny; B. & L. Zeiss lens, f/11; $\frac{1}{16}$ second; Seed Non-Halation Ortho plate; metol-hydro developer; W. & C. Platinotype print.

No less beautiful than his other many superb light-effects is "Sunset," by Leonard Misonne, one of the greatest and most talented of European pictorialists. The subject is one to which no half-tone can give adequate expression, but the original is painteresque in the extreme and a fine bit of impressionism, worthy of a prominent place in any collection, whether paintings or photographs. Data: 9 x 12 cm. Zeiss Palmos camera; Unar lens, 15 cm. focus; instantaneous exposure; November, 3 P.M.; film; gum-print.

"The Toy-Cupboard," by Hermann Ziesemer, is a spontaneous little home-scene with strong human appeal. An unfortunate feature is the rectangular spot of light in the background, and it would improve the composition to lower the tone of the prominent toy at the left. No data.

The Monthly Competition

SELF-PORTRAITS are unquestionably difficult to make and, while the number of entries in the competition was fair, the results were, for the most part, mediocre. Two prints stood out conspicuously, each about equally good, but representing radically different schools of photographic work. No other prints could justly be considered in the prize class, and so it was deemed best by the judges to divide the total amount of the prize money, $17.50, equally between Paul Lewis Anderson and J. Will Palmer. This decision was gladly accepted by both gentlemen and we think it fair to all concerned. Unfortunately, Mr. Anderson's print is one which defies reproduction. Our engraver has made several honest but unsuccessful attempts, and in response to our request for another print Mr. Anderson writes: "The original was a gum-platinum having, I think, three printings, each gum-coating being manipulated in developing, so that a straight platinum from the negative would fail utterly to reproduce the interesting qualities of the print you have."

Mr. Palmer's print is a superb likeness of this genial camera-enthusiast and an example of good portrait-work besides. Happy in pose, plastic in quality, it is a print of which he may rightly feel proud. Data: 8 x 10 Seneca portrait-camera; Chapman lens, 14-inch focus, wide open; February, 2.30 P.M.; sunny south window, lower half stopped and balance screened with cheese-cloth; 10 seconds' exposure; Standard Imperial plate; edinol-hydro developer; kallitype print on Strathmore paper. Mr. Palmer writes that when the light is strong he often uses two or more thicknesses of cheese-cloth to screen the light. Focusing was done on a piece of paper pinned to a chair at the right position; the long rubber tube was then pulled taut and a mark made on it where the paper came. Taking a position in the chair, which was moved back so that the mark on the tube was in the same plane with the eye, the exposure was made by pressing the bulb with the left hand.

The Quarterly Competition

THE besetting sin in most of the prints submitted was the inclusion of too many extraneous objects which were confusing and detracted from the principal theme. Good motives there were in plenty; and could there have been a more drastic omission of unessential objects, and a narrower angle of view generally, the number of honorable mention prints would have been much greater.

The first-prize print, "Half way up the stairs she stands," by Charles H. Flood, is exceptionally successful and spontaneous. Assuming that the balustrade is much too prominent, there is still sufficient interest in the child herself and the effect of light to hold one's attention. No self-consciousness is seen in the figure, while the extended hand and shadow on the wall add much to the attractiveness of the whole. Data: January, good light; Seed 27 plate; Goerz Dagor lens at full opening; $\frac{1}{2}$ second exposure; pyro developer; W. & C. Sepia Platinotype print.

J. W. Pons, in "A Mental Problem," has given us a second-prize print which is excellent in its naturalness and happy in the little model. The vertical lines of the chair-back are false notes in an otherwise good composition, yet they explain themselves so readily that they are not very obtrusive. Data: January, 2 P.M.; good light; B. & L. rectilinear lens, f/8; 2 seconds' exposure; pyro developer; enlargement on Eastman Standard bromide. Mr. Pons is an amateur photographer in the truest sense of the word, doing all his own work, even to the compounding of solutions, and in the actual work he finds the greatest enjoyment of photography. The print for which our prize was awarded is one of the early results of a home-made daylight enlarger.

Third prize was awarded to D. R. Battles for "The Picture-Book," a subject possessing unity and very pleasing sentiment. Data: January, 11.30 A.M.; light from a south window; bright sun on snow outside; 3¼ x 5½ Orthonon plate; Ross-Goerz Dagor, f/7; 2 seconds' exposure; eikonogen developer; Royal bromide enlargement exposed in a home-made enlarger with illumination from a tungsten lamp and developed with metol-quinol; reproduction from a print on Artura Carbon Black.

XUM

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Boston Camera Club

PLANS are now in progress for the annual exhibition, which will be conducted along original lines. The entire club has been divided into two sections by the Exhibition Committee, and each will meet frequently up to the opening of the exhibition to talk over negatives, processes and to criticize prints and do team work in making prints if that seems advisable. The idea is to improve the general club standard through co-operation and friendly rivalry between the two sections. The exhibition will be opened at the May meeting of the club, when outside judges will decide which section of the club has done the better work. Individual awards will then be made by popular vote of the club.

Several interesting collections of Interchange prints have been enjoyed recently, including those from Washington and Pittsburgh. We of Boston have heard much of the progressiveness of the Middle West, but "Pittssburgh" in hand illuminated letters was certainly "a surpriser."

At a recent meeting of the Executive Committee the following committees were appointed for the year:

Rooms: Messrs. Saunderson (chairman), Read, Hildreth, Boyd, Manson.

Entertainment: Messrs. Read (chairman), Weaver, Davis, Washburn, Titus, Corbett, Adams.

Exhibition: Messrs. Hubbard (chairman), Wing, Riley, Fisher, Fowler, Dana, Fraprie, Peabody.

Membership: Messrs. Fowler (chairman), Chandler, Hildreth.

Publicity: Messrs. Hubbard (chairman), Kellogg, Fraprie, Riley.

Photograms Illustrations

THROUGH the courtesy of the publishers, Messrs. Dawbarn & Ward, of London, we are enabled to present in this issue a number of the most interesting illustrations in "Photograms of the Year 1909," which issue was reviewed in PHOTO-ERA for January. The reproductions in question are by Mortimer, Misonne, Keighley, Holding, Marshall, Cox, Ziesemer and Mrs. Bennett. The next and succeeding issues of PHOTO-ERA will contain equally interesting plates from 1909 "Photograms" by Evans, Sury, Hofmeister, Zenker, Annan, Dührkoop, Moffat, Whitehead and Rabadan.

Toledo Camera Club

THE Toledo Camera Club held its annual meeting on February 9, at which time the officers of the past year were reëlected. The general interest of members is excellent.

New England Photographers Dine

THE Tenth Annual Winter Meeting and Dinner of the Photographers' Association of New England took place at Copley Square Hotel, Boston, January 25. Sixty members and friends were present. The guest and chief speaker of the evening was Professor Griffith, of the Detroit Museum of Fine Arts. He entertained the company with a series of reminiscences and anecdotes, drifting into art and its application to professional photography. Others present were President Oliver, Secretary Hastings, Treasurer Holman and several vice-presidents and past officers of the Association. The dinner was one of the best ever served. Everybody had a good time and was convinced that the next New England convention, at Boston, July 26, 27 and 28, will be an unusually successful event, as it is bound to be under the leadership of President Oliver, who has pledged himself to make it at least one of the most memorable conventions ever held.

President Proctor on the National Convention

To the Members of the P. A. of A.:

To follow in the footsteps of the men who have held the office of president of the Photographers' Association of America, and who have without exception upheld the honor of American photography and the prestige of this Association, is no light task for any man, however competent he may be. So, in assuming the duties and prerogatives of your presiding officer, I feel that I have undertaken a work that will require my every effort and the most serious endeavor to bring it to a successful conclusion; at least as far as *my* term is concerned. I know that the members of the Association, having honored me with their confidence in electing me to the chair, will also honor me by lending their aid in advancing the interests of the Association, and more particularly in helping to bring the 1910 Convention to a successful issue.

As matters are at present, the work of your officers for the year is largely devoted to planning and conducting the annual convention. This by vote of the members will be held at Milwaukee; and at the recent meeting of the Executive Board plans were made which it is hoped will assure not only a large attendance at the meeting in July, but also a most interesting and instructive session, which shall combine all those features which have made the conventions of the National Association so popular. It is a little early to particularize, but I may say now that, the School of Photography having found such favor, we

have decided to continue this feature, and, with the knowledge gained in the past, to plan it along even better and more valuable lines. I have received assurances of assistance from the very pick of our profession, giving a guaranty that the school program will be conducted with serious purpose and with the one idea to make it of value in the broadest way to the largest number.

Our Convention Hall is the finest meeting-place in the country, and gives us ample room without crowding for the various purposes called for. The Exhibition Hall in particular is a well-proportioned room that will permit of hanging all the pictures entered in a manner that will remove all criticism.

I am especially proud of the fact that during my term of office the women photographers of the country will meet as a body, distinct and yet a part of the Association. They will have their own exhibition — in the Exhibition Hall — and they have arranged to have the leading woman photographer of the country present to criticize their pictures. As these criticisms will be given in open meeting, it is, of course, the privilege of all members to share in the instruction that such criticism is bound to impart.

The Second Congress of Photography will meet during the convention, and I am assured that most of the State societies will be represented. Here is the opportunity to bring before the photographers of the country such suggestions for the general welfare as may be thought advisable. The Congress is in its infancy as yet, but I see much for it to do in the near future, and it should have the earnest consideration of all who are interested in improving the status and standard of professional portraiture.

The manufacturers will be well taken care of. The halls at their disposal are large and well lighted, and as we are going into territory this year that has not had a national meeting in several years, there will undoubtedly be a full representation of manufacturers and others interested in the commercial side of the business.

Of the entertainments to be offered to the members it is too early to speak. They will be abundant and varied. The local Milwaukee photographers are looking after that end, and with the proverbial Milwaukee hospitality there need be no fear that anything will be lacking for the amusement of all.

Several of the States near-by to Milwaukee have abandoned their conventions this year in order to join with us and make our 1910 Convention the more successful.

I feel that the officers of these State organizations are doing me a special favor in thus forwarding our interests, and they have my warmest thanks.

After all, I am but in the position of a general with an army back of him. I may direct and plan, with the assistance of my brother officials, but unless I have the good-will and earnest support of the rank and file — in this case the members of the Association — I can accomplish but little. It is to urge this good-will and support that I am addressing you early in the year. Weeks and months pass quickly, and unless we prepare well in advance and make up our minds that we are going to stand by each other, and by our Association, we shall find July upon us and ourselves unprepared for the event. Therefore let me call upon you *now* to determine to be in Milwaukee when the roll is called; let me call upon you now to prepare your exhibit, bearing in mind always that it is quality only that can count among your fellows, and that if each of you does your best the 1910 Convention will show such a set of pictures as will be hard again to equal; and let me call upon you to urge your neighbor to become a member of the Association, for you can do yourself the greatest good by getting all to work in harmony and for the general welfare.

If, when the Convention is over, we have progressed one tiny step in the creation of the universal photographic brotherhood which is, after all, the aim of this Association, I shall feel that my work has not been in vain.

Fraternally and cordially,

A. T. Proctor,
President, P. A. of A.

BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices.

Penrose's Process Year-Book (Penrose's Pictorial Annual, 1909-10). Edited by William Gamble. Fully illustrated. Price, cloth, $2.50. A. W. Penrose & Company, Ltd., 109 Farringdon Road, London. Tennant & Ward, 122 East 25th St., American Agents, New York.

This superb standard publication appears for the fifteenth time — sumptuous, comprehensive and valuable. It is filled with descriptions in detail of improved standard printing-methods and new processes in color and monochrome from the pen of distinguished authorities, and is embellished with about 250 superbly-printed illustrations of high artistic and technical merit by leading firms of Europe and America. The volume is indispensable to the process-worker, photo-engraver, illustrator and photographer. Some of the color-prints are extraordinary in their fidelity to the orginals. The success with which Autochromes may be reproduced on paper is also brilliantly exemplified. All high-class photo-mechanical processes rely for their success upon technically excellent photographic originals, as demonstrated in this work. The book appeals obviously to every photographic specialist who is called upon to supply the process-worker with suitable material. We strongly recommend this work to every one interested in the graphic arts, including the cultivated amateur worker.

XUM

Cash for Good Negatives

THE C. P. Goerz American Optical Company, 79 East 130th St., New York City, is in the market for excellent negatives of which the subjects are striking, attractive and produced with any of the popular types of lenses of the company's make. The price to be paid will be as high as is warranted by the character of the negative. Communicate with the above-named firm.

The College Camera Club

THIS organization has now become an important feature of the regular course of study at the Illinois College of Photography. Its object is purely to improve the quality of the students' photographic work, and to that end a regular monthly contest is conducted, each student in the Printing-Department being required to enter three mounted prints. The entire work must be done at the clubrooms, which consist of two floors, one provided with a single-slant light and the other fitted with an Aristo lamp. There are, also, reading and music-rooms adjoining. The judges for each contest are selected by secret ballot from the Faculty of the college. Professor Felix Raymer was selected to judge the contest for January. In connection with these contests the club serves a light lunch for all. Three prizes are awarded, each month, as follows: first prize, gold medal; second prize, silver medal; third prize, a merit certificate. The first-prize print is retained by the club, to be framed and placed on the clubroom walls.

Kodak Advertising-Contest for 1910

SO great was the success of the 1909 Kodak Advertising-Contest that another along similar lines has been announced for 1910. The prizes are generous because the best pictures obtainable are desired — pictures which suggest the pleasure, simplicity and convenience of the Kodak system of photography, and do it so convincingly that they give life and reality to advertisements. In this contest $2,000.00 is paid for ten pictures; but there are rewards waiting for many others who do good work, as twice as many more prints are bought every year. Nor is the Eastman Kodak Company the only concern which uses similar material. Thousands of advertisers the country over are after illustrations for their magazine work, catalogs and booklets. They want live, virile stuff, and the man who makes it can get his own price.

There 's a big field for the man with ideas, in advertising-illustration, and there 's no better way in which to get a start than to enter the Kodak Advertising-Contest for 1910.

TERMS

1. Each picture is to contain a figure or figures, and is to be suitable for use as an illustration in advertising the Kodak or the Kodak system of amateur photography.

2. Each print in Class A must be from a negative 5 x 7 or larger. Each print in Class B must be from a negative 4 x 5 or 3¼ x 5½ or larger.

3. *Prints only* are to be sent for competition — not negatives.

4. Prints must be mounted but not framed. (Mounts should show about one-inch margin.)

5. No competitor will be awarded more than one prize. (This does not prevent a competitor from entering as many pictures as he may desire.)

6. Due and reasonable care will be taken of all non-winning prints and, barring loss or accident, they will be returned to their owners at our expense; but we assume no responsibility of loss or damage.

7. The negatives from which all prize-winning prints are made are to become the property of the Eastman Kodak Company, and are to be received by it in good order before payment of prize-money is made.

8. Contestants who are awarded prizes must also furnish to us the written consent of the subject (in the case of a minor, the written consent of a parent or guardian) to the use of the picture in such manner as we may see fit in our advertising, as per the following form:

For value received, I hereby consent that the pictures taken of me by ————, proofs of which are hereto attached, or any reproduction of the same, may be used by the Eastman Kodak Company or any of its associate companies for the purpose of illustration, advertising or publication in any manner.

I hereby affirm that I am the $\frac{\text{parent}}{\text{guardian}}$ *of ———, and for value received, I hereby consent that the pictures taken of* $\frac{\text{him}}{\text{her}}$ *by ————, proofs of which are hereto attached, or any reproduction of the same, may be used by the Eastman Kodak Company or any of its associate companies for the purpose of illustration, advertising or publication in any manner.*

NOTE.— Blank forms will be furnished on application.

9. All entries should be addressed to EASTMAN KODAK CO., Advertising Department, Rochester, N. Y.

10. In sending pictures, mark the *package* plainly, "Kodak Advertising-Contest;" and in the lower left-hand corner write your own name and address. Then write us a letter as follows:

I am sending you to-day by $\frac{\text{Express}}{\text{Mail}}$, *charges prepaid, ———— prints. Please enter in your Kodak Advertising-Competition. Class————*

Yours truly,
Name,————
Address, ————

11. The name and address of the competitor must be legibly written on a paper and enclosed in a sealed envelope in the same package in which the prints are forwarded. There is to be no writing on prints or mounts.

12. We will promptly acknowledge the receipt of pictures, and, when awards are made, will send each competitor a list of prize-winners.

13. Only recognized professional photographers conducting a studio will be allowed to compete in Class A. Class B is open to all photographers not in above classification.

14. This contest will close Oct. 1, 1910. The prizes:

CLASS A — PROFESSIONAL PHOTOGRAPHERS ONLY

Negatives 5 x 7 or larger

First Prize	.....	$500.00
Second "	.....	400.00
Third "	.....	250.00
Fourth "	.....	150.00
Fifth "	.....	100.00
		$1,400.00

CLASS B — AMATEURS ONLY

Negatives 4 x 5 or 3¼ x 5½ or larger

First Prize	.....	$300.00
Second "	.....	150.00
Third "	.....	75.00
Fourth "	.....	50.00
Fifth "	.....	25.00
		$600.00

SUGGESTIONS

First of all, it should be remembered that these prizes are not offered for the sake of obtaining sample prints or negatives made with our goods. Merely pretty pictures, merely artistic pictures, will not be considered. The pictures must in some way connect up with the Kodak idea — must show the pleasure that is to be derived from picture-taking, or the simplicity of the Kodak system, or suggest the excellence of Kodak goods; — must, in short, help to sell Kodak goods, by *illustration* of some one of the many points in their favor.

The jury will be instructed to award the prizes to those contestants whose pictures, all things considered, are best adapted to use in Kodak (or Brownie Camera) advertising.

As reproductions of the pictures will often be in small sizes, too much detail should not be introduced.

Pictures for reproduction should be snappy — vigorous; for they lose much by the half-tone process.

Where apparatus is introduced, it must be up-to-date. If you have n't the goods, you can borrow.

It is highly probable that we shall want to secure some negatives aside from the prize-winners. In such cases special arrangements will be made.

If you are interested send for a copy of the Souvenir of 1909 contest, which gives an idea of the kinds of pictures that we consider valuable from an advertising-standpoint.

THE JUDGES

The Jury of Award will consist of photographers and of advertising-men who are fully competent to pass upon the work submitted. Full attention will be paid, therefore, to the artistic and technical merit of the work, as well as to its strength from an advertising-standpoint. Announcement of the names of the judges will be made later.

Camera Club of New York

An interchange set of lantern-slides was exhibited March 4, at 8.30 o'clock, at the rooms of the club. March 11, Mr. Harold M. Bennett delivered a highly entertaining lecture, illustrated by lantern-slides in color, entitled "A Little Journey Through Japan." March 12, at 7 o'clock, occurred the ninth annual dinner of the club at Hotel Brevoort, 7 Fifth Ave. Members and friends were present in considerable number and a very pleasant evening was passed.

LONDON LETTER

By E. O. HOPPÉ, F.R.P.S.

We are just now in the "haute saison" of the photographic exhibitions in England. Much talk has been heard lately as to the advisability to break away from the old-fashioned arrangement of having a number of separate classes, such as portraiture, landscape, architectural subjects, still-life, flower-studies, etc. It was found that this scheme, which has been in use for many years, was very apt to encourage those members of our photographic community which we gracefully describe as "pot-hunters." Of course, our big London shows, such as the Royal and the Salon, and also a few of the leading provincial exhibitions, have had one big pictorial class for a long time. A similar plan has now been adopted by various other exhibitions. The Hackney people, for instance, arranged one class which was confined to members who have not received more than five awards. Another class was for those who have never received an award; and there was an open members' class, in which it was assumed all the exhibitors had received more than five awards. This division is distinctly good, and encouraging to the beginner. An innovation, also, was made by Birmingham this year, which proved to be extremely interesting. I do not know whether a similar plan is not already followed in America; if not, I would earnestly recommend organizers of exhibitions in the States to adopt arrangements on the following lines. Besides the ordinary classes for (1) framed pictures of any pictorial subject, (2) lantern-slides, (3) colored photography by any process, there was a scientific section which included some excellent subjects of natural history, geology, radiography, telephotography, and other scientific subjects, such as lightning, electric sparks, and photographs dealing with the detection of crime. The extremely important factor which photography plays in all branches of public life, in industry, commerce and modern education, was well demonstrated in the classes set apart for applied photography. There were photographs illustrating camp-life, naval or military manœuvres, suitable for recruiting-purposes; others illustrating life in factories and workshops (dairy, brewery, electric-light stations, tram depôts, fire-stations, gas-works,

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railways, etc.); photographs illustrating the various processes a manufactured article passes through; photographs illustrating life in the streets; photographs of various kinds of sport and travel, and photographs suitable for advertising.

Among the six Honorary Members elected by the "Freie Photographische Vereinigung in Berlin" on the occasion of its twentieth anniversary are two Englishmen, Sir W. de W. Abney and J. Craig Annan — two men whose names have by now become household words in the photographic world and who have contributed very considerably to the advancement of photography as a handmaid to science and art.

As was already announced in PHOTO-ERA, the Linked Ring has decided not to hold a Salon in England in 1910. In all probability, however, there will be a London Salon, organized by the members of the Salon Club. To the seven members of the Linked Ring, whose names were published as the organizers, the following must be added as the founders of the Salon Club: Mr. and Mrs. Cadby, E. O. Hoppé, Arthur Marshall and Ward Muir. The new movement has the active sympathy of the foremost pictorial workers all over the world, and its effort will be to hold the most catholic and comprehensive exhibition of purely pictorial photography ever originated.

One of the most beautiful printing-processes is, without doubt, photogravure. Though not very difficult to work, it will hardly ever be popular with the average camera-user, on account of the fairly heavy expenses of the initial outlay which it necessitates. There is a method, however, which in its results closely resembles prints obtained by the above-mentioned process. Every one of my readers is, probably, well acquainted with the excellent methods of obtaining warm brown tones on bromide and gaslight papers by means of the hypo-alum bath, the sulphide bath and the still more reliable thiomolybdate toning-bath, suggested by Mr. H. E. Smith. This toner is capable of giving a great variety of tones, according to the deposit in the original print. Both uranium and copper ferricyanide have been suggested, and are quite reliable in their production of red tones. It is, however, in the production of tones which are neither a decided brown nor red, but which may be described as warm black or brown black, comparable to that seen in the best photogravure, that the following formula and method of treatment are suggested by Mr. Mortimer, who has made a series of experiments in this direction. The following solutions are made up:

A

Boiling water	1 pint
Sulphate of copper	120 grains
Neutral citrate of potash	1 ounce

B

Boiling water	1 pint
Ferricyanide of potash	100 grains
Neutral citrate of potash	1 ounce

For use, take equal parts of A and B and dilute with four times the quantity of water. It should be noted, in using this bath, that the image is not intensified in any way, as occurs with many of the brown-toning baths, and also that the very best effects are obtained by using one of the "Cream Crayon" or toned bromide or gaslight papers now on the market. A thin variety, with a smooth surface, will give the best effect. The toning may be commenced immediately after the print comes from the final washing-water; but if it is allowed to dry, it should be well soaked again before proceeding with the toning. The immersion in the toning-bath should not be continued too long, or the print will begin to take on a pinkish tinge and continue until the image is quite red, as in ordinary copper-toning. With a good, strongly-developed bromide print an immersion of about a couple of minutes will generally be ample to impart the desired tinge of warmth to the black deposit. It is very important that the toning-action is not continued too far.

Prints toned in this manner, when completed, should be treated to a bath of Zapon (celluloid varnish) to give luster to the shadows. If the prints are made with broad margins, and a plate-mark is added, the photogravure effect is very notable and highly artistic.

The American Federation of Photographic Societies

An organization for the advancement of pictorial photography, encouragement of pictorial workers, and the development of new talent.

OFFICIAL ORGAN: PHOTO-ERA

President: GEORGE W. STEVENS, Toledo Museum of Art, Toledo, O.
Vice-President: JOHN F. JONES, 934 Ash St., Toledo, O.
Secretary: C. C. TAYLOR, 3236 Cambridge Ave., Toledo, O.
Treasurer: GEORGE W. BEATTY, 1629 Nicholas Bldg., Toledo, O.
Historian: WM. A. RHEINHEIMER, 1222 Clara Ave., St. Louis, Mo.

PRESIDENT STEVENS has issued a call for a meeting of the Executive Board of the American Federation of Photographic Societies, to be held in the office of the Toledo Museum of Art, Toledo, O., on Saturday, May 7, 1910, at 2.30 P.M. This will be a very important meeting of the Federation and much very important business will require careful attention.

Each club in the Federation is entitled to three representatives, who should be duly elected and qualified at a regular club meeting, and their names should be sent to the secretary at the earliest moment.

In the cities where the Sixth Salon has been hung the newspapers and the public have certainly been unstinting in their praise as well as in their attendance, which, so far, has been greater than for any preceding Salon.

WITH THE TRADE

Excellent Dry-Plates

DURING the past few months it has been the pleasure of our Mr. Riley to make a considerable number of snow-landscapes and indoor portraits on Ilford plates of different emulsions, including the Monarch, Zenith, Special Rapid and Rapid Chromatic. In every instance, both with tank and tentative development, the results were superb, the negatives obtained being characterized by brilliancy, fineness of grain and a long scale of gradation with plenty of latitude in exposure and development. Amateur or professional will be amply justified to place every confidence in Ilford plates, obtainable in the United States of Hastings and Miller, 118 Nassau St., New York City.

The Studio Dressing-room

WHILE nearly every high-class studio is provided with comfortable and well-appointed dressing-rooms for the use of sitters, there is a certain feature which the proprietor frequently overlooks. We refer to the apparently small detail of toilet-soap.

It has come to our notice that in many studios a very inferior article is placed at the disposal of a refined patronage. A careful person will refrain from touching a piece of soap which is sticky, soft and ill-smelling. The proprietor should see to it that the very best soap procurable, as well as a high-class face-powder, is a constant feature of his dressing-rooms; for a society lady or refined actress, accustomed as she is to the best of everything, should be offered nothing of inferior quality.

It is hoped that this will meet the eye of the sagacious photographer, who tries to make his patrons as comfortable as possible, not forgetting to provide the little luxuries to which they are accustomed in their own homes.

Retired Goods

THE Eastman Kodak Company announces the retirement from the market of the following brands of papers: *Kloro, Albuma and W. D. Platinum*, other goods of Eastman manufacture having taken their place.

Post-Cards of Local Interest

THE coming summer will be the best season post-cards ever had, so get in early with your new cards. No racks are complete without local views. If you are in doubt where to place your order for view-cards, write the National Color-type Company of Cincinnati, O., for its samples.

It is the first maker of the hand-colored cards in America, old enough to know good cards, and young enough skilfully to prepare them.

Motion-Picture Film

AN idea of the extent of the new, vast industry of making motion-picture film may be gained from the fact that three of the most prominent Eastern producers consume one hundred pounds of Agfa Metol and two hundred pounds of Agfa Hydroquinone per month. Six of the firms next in size consume fifty pounds of Agfa Metol and one hundred and fifty pounds of Agfa Hydroquinone per month. This is, also, an indication of the popularity of these excellent Agfa products for developing motion-picture film.

A New York Home for Ansco

A POPULAR product in a populous city requires adequate room in which to carry the necessary stock to meet demands promptly and to conduct business with the greatest possible efficiency. Having in mind the interest of the many Ansco dealers who rely on the New York branch, the Ansco Company has provided a new building at No. 129-131 West Twenty-second St., a few doors from Sixth Ave., and in one of the busiest and most interesting sections of New York City. Customers are invited to look over the extensive and comprehensive line of photographic staples always in stock. The necessary convenience will also be afforded them to get an intimate knowledge of the quality and possibilities of Ansco products. Printing-rooms, where competent demonstrators will assist in thoroughly familiarizing one with Cyko paper, are provided, and it will be the photographers' and the dealers' home whenever they wish to take advantage of its splendid central location and the opportunities for information which are extended.

Voigtländer & Sohn at Chicago

WE are authorized to announce that the Voigtländer & Sohn Optical Works have established a new branch office at 617-631 West Jackson Blvd., Chicago, Ill., where will be carried a complete line of the firm's photographic lenses, cameras, binoculars, telescopes, microscopes, etc., and where all kinds of fitting and repairs will be promptly attended to.

This new establishment will, like the firm's New York house, be controlled by the home office at Braunschweig (Brunswick), Germany, and conducted in the prompt and business-like manner which is so well known among the trade. The Chicago office will enable the firm to fill orders from the Central and Western States, including Ohio, in a shorter time than heretofore. All Central and Western patrons are requested to communicate with the Chicago house.

The New York office will undergo no change, except that its Accounting-Department will be transferred to Chicago, and for this reason all

remittances and matters pertaining thereto should be sent to the Chicago address. The New York office will remain at 225 Fifth Ave, where business will be transacted as heretofore, and customers in territories east of Ohio are requested to send their orders to New York City.

A Good Method of Double Printing

PROBABLY the simplest and easiest method of double printing is that given in the booklet which is offered free to our readers by the Kilborn Photo-Paper Co., whose advertisement appears in this issue. This booklet also contains instruction for the manipulation of developers, along with other valuable information. If you have n't received a copy our advice is — send for one.

A Well-Known Manager

IT is a pleasure to announce that Mr. J. D. Johnson, of San Francisco, has assumed the management of the Quaker Drug Company, of Seattle, Wash. Being known, as he is, throughout the country, and bringing to the conduct of affairs the fruits of years of experience, a bright future is anticipated. The aim of the company is to merit the confidence and esteem of all to whom its name may be known. The line of photographic supplies will continue to be as complete as ever.

Cooke Extension-Lenses

WE are asked by The Taylor-Hobson Company to announce that its Series II Cooke anastigmats may now be obtained to order with extension-lenses somewhat like those furnished for the other series. By removing the front glass and substituting another, the entire focal length is increased; thus, from the same point of view, the photographer obtains larger images of distant objects. These extension-lenses increase the size of image about fifty per cent; for example: an object taken with the normal lens, and two inches long in the photograph, is from the same position, made three inches long with the extension-lens. It is claimed that better results are thus obtained than with the separate portions of other makes, practically two complete anastigmats being available. Present users should note that their Series II lenses may be fitted with these new extensions, but the register-number of the lens should be given with the order. Extension-lenses for Cooke anastigmats, other than the Series II, have long been used, the back glass having hitherto been the one replaced. The Series II are the only lenses which permit the change at the front.

Nicola Perscheid and Zeiss Lenses

ONE of the best advertisements we have ever seen is the illustrated brochure devoted to the work of Nicola Perscheid, of Berlin, Germany. It is published by the celebrated firm Carl Zeiss, of Jena, Germany, and issued in this country by its United States agent, E. B. Meyrowitz, 104 East 23d St., New York City, to whom applications for copies should be addressed.

The publication, 8 x 10 in size, consists of a biographical sketch of Nicola Perscheid and an analysis of his refined style of portraiture, in the studio and in the open, as well as his methods of operation — in admirably-expressed German. Then follow twenty full-page half-tone reproductions, which exemplify the artistry of this eminent practitioner, the subjects, for the most part, being members of royalty and the aristocracy of Berlin. These portraits demonstrate the success that can be achieved with Jena-made Carl Zeiss lenses, notably the Tessar F/4. 5.

Hayden's Film-Tank

THIS moderate-priced piece of apparatus is a boon to the amateur photographer who cannot have a dark-room in which to develop his exposures, and is especially valuable to the tourist because of its compactness. No transfer-box or apron are required; the device is simplicity itself, consists of the fewest possible number of parts and produces excellent negatives in six minutes. A descriptive cut will be found in the advertisement on another page.

Velox Post-Cards

TOO late for correction in our March issue came a request to change the price of Velox Double Post-Cards from fifteen cents per dozen, as incorrectly stated on the electrotype sent us by the Eastman Kodak Co., to forty-five cents. Incidentally, this is a product which every owner of a panoramic camera will do well to investigate.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

Society or Title	*Date*	*Entries Close*	*Particulars of*
Sixth American Photographic Salon St. Paul, Minn.	Mar. 24 to Apr. 6		C. C. Taylor, Sec'y, 3236 Cambridge Ave., Toledo, O.
Racine, Wis.	Apr. 20-30		
Toronto Camera Club	Apr. 4-9		Hugh Neilson, Sec'y, 2 Gould St., Toronto, Ont.